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DEVOTED TO AGRICULTURE AND ITS KINDRED ARTS AND SCIENCES.

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SEPTEMBER.

"Season of mists and mellow fruitfulness!
Close bosom friend of the maturing sun:
Conspiring with him how to load and bless
With fruit the vines that round the thatch-eaves run;
To bend with apples the mossed cottage-trees,
And fill all fruit with ripeness to the core;
To swell the ground, and plump the hazel shells
With a sweet kernel; to set budding more,
And still more, later flowers for the bees,
Until they think warm days will never cease,
For summer has o'er-brimmed their clammy cells."

KEATS.

SURELY it may be said that no season of the year comes attended with so much beauty, and so many bounties and blessings for all classes, as the autumn. We have never met an individual that did not welcome it for its temperate climate, its clear sunny days, its gorgeous woods, its joyful harvests, and in many cases its restorative coolness to those who have been visited by the diseases of hot weather. To the laborer it brings relief from the sultry toil of summer; to the sedentary man an opportunity for vigorous exercise; to the farmer, the reward of his industry; to the lover of nature, prospects of beauty unrivalled by those of any other season. It is peculiarly the season of jollities and festivities; the season for garnering the produce of the year, and making glad the heart with its golden abundance; and though it leads along the cold and cheerless winter, we welcome it with rejoicings and with thanksgivings.

"While the year was yet young," says a modern writer whose name we have forgotten, "and the soft winds of spring went whispering abroad tidings of green leaves and budding flowers; when the blue canopy of heaven shone with a serene and happy light, and hidden runnels began to chime a cheerful music, and the primrose glimmered in the hedge-row, and the violet peered forth timidly from mossy banks and southern slopes, when trees were bursting into leaf, and buds rehearsed what seemed a half-forgotten strain, and insect life began to stir and waken from its wintry sleep—what season so hilarious as the sunny, showery spring!

"It melted into summer; and what a well-spring of enjoyment was there then, in dim woods, and by the margin of bounding rivers, when the fierce heat of day was yet prevailing unabated; and when the more grateful twilight stealthily succeeded, go where you would, how deep—how almost divine a calm, descending hour by hour, and deepening as it fell, invested all the purpling earth! At such a time, how often did we say in our hearts, what season can vie with affluent and flowery summer!

"But that, too, merged by gradations, delicate and imperceptible as rainbow-tints, into the fruitful and teeming autumn—a gladsome and a blessed season. And each hath its particular and individual grace; each its distinct and separate attributes and associations, a charm exclusive and incommunicable."

To the New England farmer what a succession of glad employments does this season lead up; to him especially who has not forsaken the simplicity of habits of his forefathers, while he has shaken off their superstitions and their prejudices. With a joyful heart he walks abroad and surveys the reward of his toils, and beholds with a rational pride, the value of his own services to the great world. At the present time, especially, is this fact made apparent to the community. Go where we will, the fields, the barns, the granaries, the stores and markets, are full of the immediate produce of the farm. At other seasons it is more or less concealed by the metamorphoses which the different articles of produce have assumed, after passing through the

hands of the manufacturer. In all places substantial bounties and luxuries are presented to sight, that serve to make all men "venerate the plow."

Apples are reddening on the orchard trees, under the ripening influences of the sun, or lie in golden and crimson heaps in the fields. Peaches with downy cheeks, wearing the blush of mellow ripeness, or drooping heavily from their boughs, all waiting to be eaten. Quinces in glittering rows along by the garden fences and enclosures, outrival in golden splendor the fruits of the sweet-scented orange-groves of the tropics. Every wayside in the country is bordered with this profusion; and a glittering variety of fruits hangs from thousands of boughs, and spangles the green turf of every field and orchard.

What a variety of hues do the fields exhibit, according to their different produce! There we observe the ashen gray of the oat field; the brilliant yellow of the wheat and rye; the green of the clover patch; the olive green of the pastures, all occasionally interchanging with the red and russet of the tardy buckwheat. Vegetables of divers sorts in their perfection, attract the gaze of the traveller. Here are onions that would draw tears from the whole nation, and cabbages exhibit heads with developments that would astonish the phrenologist. In fields that in the miry spring were covered with grey rocks that glistened upon the blank soil, pumpkins now lie lazily upon the earth, their golden globes glistening between the hills of ripening maize; and squashes, with their long and graceful necks that rival those of the swan, are nestling under the broad leaves of their teeming vines.

Now look abroad upon the hills and over the pastures! How would the lover of the picturesque or of cheerful pastoral scenes delight to behold the grazing inhabitants of these happy fields! What is more picturesque than a herd of cows feeding on the sheltered slope of a hill, or a flock of sheep bounding over the open whortleberry pastures! Providence has benevolently made all these objects delightful to man, that he may be tempted to join in the labors of the husbandman, in those pursuits, which, as being the most noble of occupations, were assigned to the great progenitor of our race, before he fell from his original purity, and when he enjoyed the companionship of heaven. Man, urged by necessity, leaves these peaceful and beautiful avocations, to tempt the seas, or to engage in the strife of the city; but never, in his solitary moments, does his heart cease to yearn after his ancient rural home, the rustic employments of his youth, his wanderings among the hills and woods, and all the simple delights of country life!

After the survey of all these bounties and luxuries which the autumn displays, who does not, in his heart, if he stops to consider his obligations to his fellow-men, bless the husbandman and his labors, and join in lauding his employment as the most noble and valuable of pursuits! Though it is very generally believed that the labors of the farm are not likely to lead to any superfluous wealth,—who does not know that there is no safer means of securing a competency and a frugal independence? The present season teems with abundant proofs of the comforts and blessings that reward his toiling exertions. Agricultural fairs invite the community to witness the proofs that his toil is not in vain, and the numerous varieties of rural implements for facilitating his labor, prove that ingenuity as well as industry mark the progress of agriculture.

Though the New England farmer is ready to avail himself of labor-saving machinery, he is no niggard of his own labor. With a hearty willingness to afford employment to those who can serve him, he is himself no stranger to toil, which he regards as one of the luxuries of life. He considers toil as really no part of the curse which was inflicted on mankind, when the original sentence was pronounced upon Adam. He regards it as one of the necessary conditions by which we are enabled to secure the united blessings of health, cheerfulness and competence; that when guided by intelligence it is ennobling, and that ignorance only can degrade it. No man so frequently beholds the rising sun; none so frequently hears the song of the earliest birds, or breathes the gales of the morning, while they are still sweet with the emanations of opening flowers. Whether he is holding the plow or pitching sheaves, or "driving his team a-field" or trading with the purchaser of his produce—he is plainly the best living example among us of freedom and independence.

Let every individual farmer, while this honorable pride animates his breast, see that he be not, by his ignorance, or his prejudice, or his backwardness to adopt the improvements of the age, unworthy to take rank with others of his own class. Let him not become a mere dull and ponderous animal, a slow-spoken, heavy-witted saunterer, as somebody has described the Saxon clodpole, whose cart-wheels never yet rolled out of the ruts made by the wheels of the fifth generation back, whose head is as empty as one of his own pumpkins; a mere Grubbinol or Bumkinet, who is elevated only one grade above his own oxen, and who might learn wisdom from his horse. There are a few such dolts still among our rural population; and they are each individually wiser in their own conceit than if they possessed the wisdom of Solomon. They look with supreme contempt, for contempt is the offspring of ignorance, upon the new improvements, feeling the utter absurdity of supposing that the *boys* they instructed should be able to teach them, their instructors, any real knowledge!

Let every tiller of the soil honor his profession and make himself worthy of it, by keeping pace

with the wisdom of the age, and his profession will honor him; and those who confine themselves to the old ruts of a past dark age, will soon sink into mere drudges, and let themselves out for half pay. May the swarthy cheeks of the New England farmer be always united with the honest civility of a country gentleman, and while his hard fist emblemizes his robust manhood, may his intelligent speech prove him a worthy citizen of a free republic, and his wise conduct set an honest example to the generation that will follow him.

For the New England Farmer.

NOTES FROM MAINE.

Mr. Editor:—I came from Northampton to Augusta on the Kennebec, on the 7th and 8th of July, and after remaining there twenty days, and making some excursions into adjoining towns, I came in a carriage to this place on the coast, through Wiscasset, July 28th.

The wet season has been very injurious to hay in this State, and much has been damaged, and some entirely spoiled. Hay is the great crop of the towns on the Kennebec, and of other parts of Maine. About Augusta, when I arrived there, extensive fields of herds-grass were seen in every direction, and mowing had just commenced. Mingled with the tall herds-grass, were in many fields clover, poa pratensis or English spear-grass, and red-top. In some places was to be seen the triticum repens, called quack-grass and witch-grass by some, and a little festuca. In some lean and exhausted spots, might be seen the Danthonia, that wretched poverty-grass, so common in the county of Hampshire. In low, wet lands grew poa-aquatica, poa-canadensis, several species of carex or sedge, and rushes and bullrushes. Every species of grass that I have observed in Maine, grows in Northampton; and several species grow in Northampton that I do not see in Maine, as the sweet-scented vernal grass, some species of Andropogon &c.

The soil in the towns on the Kennebec is a strong, clayey soil, superior to much of that in Massachusetts, but it makes shocking roads in wet weather. The farmers raise corn, potatoes and oats, and some pieces of wheat and barley are seen. Indian corn is rank and luxuriant, but if frosts happen early, or even at the usual time, the corn will hardly get ripe. Potatoes look well, but it is too early to determine what the crop will be.

White weed, or ox-eye daisy, I found abundant in most places, from the towns around Boston to those on the Kennebec, and it grows more or less in all the towns from Augusta to this rock-bound coast.

Edgecomb and Boothbay, the towns between Wiscasset and the sea, are rough, hilly and rocky, and a large portion of the land is incapable of cultivation. There are, however, many fertile spots where good crops are seen, and the poor lands on the rocks furnish pasturage. The soil has more sand and gravel, and less clay, than that on the Kennebec. Herds-grass is in many of the mowing lots in these towns, but the finer, shorter grasses are more common. Where the rocks are near the surface, and where the soil is lean and impoverished, the Danthonia grows, and extensive tracts of it discover themselves by their whitish tops. Some mowers told me that they mowed it, but they said it was hardly worth mowing. A large part of those who occupy the lands in Boothbay spend a portion of the year in fishing, or some other employment at sea.

Many of the farmers of Maine are gradually exhausting their lands; they are doing what so many in Massachusetts have already done. The soil in the vicinity of the Kennebec and in some other parts of Maine, will last longer than most of that in Massachusetts, but annual mowing and selling the hay, and other modes of farming here, must end in impoverishment, sooner or later. With all our boasting in this country, we understand exhausting land much better than improving it, and in most of the States, the exhausters are much more numerous than the improvers. S. Judd.

Boothbay, Maine, Aug. 5, 1857.

Crops in Western Massachusetts.—We have had but one favorable report of the fruit crop this season. In all sections the accounts are that there will be but very little fruit of any kind. A friend writes us on the 27th inst., from Whately, in the Connecticut Valley, that the crops in that town are "coming on finely. Corn is backward, but holds a good color, and I think we shall have an average crop. Tobacco is the great crop here—it is estimated that there is from 150 to 200 acres in this town the present year, which, if it does well, will average 1600 pounds to the acre, and will bring at least, 12½ cents a pound, some sales having already been made at that price. At this rate the aggregate amount will be $30,000. The last year's crop is held at from 25 to 40 cents, according to quality."

The season continues wet and sultry; haying is a precarious business, and weeds are dominant. We think that more than one-half the hay already secured has been wet. Salt is in demand, and purchasers will be quite likely to get some pickled fodder before the year is out.

A Gobbler Story.—The mother of one of our most prominent merchants, writing from her farm in Preston, Ct., tells the following amusing anecdote of her poultry yard: The old lady keeps turkeys, and all the hens are now setting. From day to day, as, one after another, his wives left him to attend to the duties of incubation, the lord of the flock was observed to grow more and more gloomy and dispirited, and when at length the last one had gone, he lost his appetite and seemed sinking into decline. At length one day a new idea seized him. He had been inspecting the nests, and suddenly—when this new idea struck him—he "pitched into" the nearest hen turkey, drove her off, and seated himself in her place. It was vain to dislodge him from one nest, for immediately he ran to another. He was bound to hatch something, or perish in the attempt, and at this moment that venerable gobbler is sitting on two dozen turkey eggs, with a fair chance for bringing off a large brood of young ones!—*Springfield Republican.*

LETTER FROM MR. BROWN.

COUNTRY RAMBLES.

Pelham, N. H., July 9, 1857.

DEAR SIR:—After two or three weeks of rather severe labor with the hoe and pruning tools, I have laid them down for a little season of rest and recreation, before commencing that most important part of farm duties, *the hay harvest.* I feel more freedom in doing this, because I think the grass, generally, is not yet in proper condition for the scythe; the season has been wet and cool in all this region, and grass has grown rapidly and rankly, and now presents a heavy stand on lands that are in good heart. It needs, however, a few days of our usual July suns to perfect its juices and give it that sweetness and aroma which make it so attractive to our stock. I believe the *hoe* is generally neglected too much during the first half of July. So with one of the steeds who has performed his part towards perfecting the potato and Indian corn crop, the four-wheeled chaise, together with her who has pulled an even yoke with me for many years—no matter how many—I propose to amble quietly along through the green lanes of the country, and tell you and our readers something of what I may see or hear, if I can persuade myself that it will be either of interest or profit to you or them.

Crossing the boundary line of our good State at Dracut, about four miles north of Lowell, I entered Pelham, N. H., and called upon B. F. CUTTER, Esq., a gentleman well known to our readers by the sensible and practical thoughts which he has occasionally communicated to the *Farmer.* Mr. Cutter is a self-taught man, having begun in the world with nothing but *his hands and an honest purpose.* Without capital to purchase lands and stock, he applied himself earnestly to those pursuits which required no other capital than that already mentioned; whatever he earned, however, was soon invested in land, and it was not many years before he was a land-owner and cultivator. His establishment is now a villa in itself, the house being large and commodious, the out-buildings ample and convenient. The farm consists of one hundred acres, containing nearly every variety of soil found in Hillsboro' county. That he is entitled to the term of *farmer,* his broad and highly cultivated fields attest; he is also a *horticulturist,* as there is scarcely a shrub or tree indigenous to New England but may be found growing in beautiful luxuriance in his grounds.

In walking over the estate with him we found something attractive at every turn; here a green and smoothly-mown drive-way encircled a nursery of trees including every tree known in the State—there a charming brook gathered within the limits of an artistic wall, while within view it meandered through tangled shrubbery or babbled over rocks, until arrested and made to drive a rustic wheel. Here the scythes, axes, &c., were ground with ease and facility, and much hard labor averted. Huge rocks were covered with grape vines, thus converting them into objects of beauty and utility.

In the forest screened from the sharp rays of the sun by the overhanging branches of lofty pines, we found a plat which had been sowed with the seeds of the arbor vitæ, hemlock, and other evergreens, maples, birch, elm, &c., and thousands of young trees of the height of an inch were pleasantly growing under the protection of the noble pines which everywhere surrounded them. It seemed as though every seed planted had germinated, for the young plants covered the entire ground, all in admirable confusion. Mr. C. stated that not one-tenth of these seeds would have come up if they had been planted in garden soil even with the most careful attention.

Mr. Cutter is also a *florist;* most of the wild flowering plants common to New England may be found transferred to his grounds, where they bloom in such freshness and beauty as to draw expressions of admiration from most beholders. One of the ladies who rambled with us remarked, "If these were exotics, with some French or German names, or had been boxed by the Chinese Expedition and introduced by authority, how eagerly they would be sought, and how quickly find a place in all our gardens." It is questionable whether any country affords a more varied or beautiful flora than New England, but, as Mr. C. remarked, it is better known in England than by our own people. Many of the plants and flowers common in our boyhood ornamented his pleasant grounds; the splendid meadow pink, two or three varieties of laurel, the leather wood, whose tough bark we made to supply the place of an absent shoe-string, and the unique and attractive alternate cornel, that loves to spring up along the winding cow-paths in the thick woods,—all these, and many more, the acquaintances of our early youth, were welcomed as old and familiar friends. His grass and corn, his sturdy oxen and team horses, all attest that Mr. C. is a farmer who understands his profession. He makes, annually, about four thousand bottles of tomato ketchup, for which he finds a ready market at a remunerating price.

Mr. Cutter's practice and success emphatically contradict the oft-repeated assertion *that farming is unprofitable.* It is true that he has possessed an advantage not enjoyed by every farmer, that of being quite near a good market,—but it is equally true that his farm, when he took it, was an uneven, very rocky and difficult soil to subdue. He began with the idea that *manure* and *skill* are the true capital of the farm, and with this as his pole-star, he has succeeded, as will nine out of ten every-

where. The farm is not only clothed with beauty, yielding profit, but in conversing with his children, young men and women, we found them *observing* and *practical* persons, with well-balanced minds, and having been already engaged as teachers in the district schools.

I was pleased and instructed by my visit, and soon found the secret of the practical character of his communications to the columns of the *Farmer*. When you have left that bed of machinery upon which I saw you last, and are on your legs again, I hope you, also, will find opportunity to visit our mutual friend, and judge of his skill for yourself. I am truly yours, SIMON BROWN.

JOEL NOURSE, ESQ., BOSTON.

For the New England Farmer.

ABOUT GUANO.

MR. EDITOR:—In the June number of the *New England Farmer* there is an article "about guano," (signed John Briggs,) which conveys an impression which I think is far from correct. The writer states that the virtue of guano lies very much in the ammonia contained therein. He assumes that all guano containing that element must betray it by its smell, and that consequently all guano not having the ammoniacal odor must be worthless, or to use his own words, "not worth buying." I presume Mr. Briggs has been led into this error by his experience with the Peruvian or Chincha Island guano.

Ammonia may be so combined that its presence cannot be detected by the smell, as in the case of the Baker & Jarvis Island guano. The addition of a little lime and moisture will set the ammonia free, the lime combining with the element before in combination with the ammonia, for which it has a stronger affinity.

The analysis of the Baker's Island guano is as follows, according to Dr. Hayes:

100 parts consist, of moisture	2.60
Humates of lime, ammonia and magnesia	10.42
Ulmates of do. and vegetable fibers	2.77
Bone phosphate of lime and magnesia	87.10
Insoluble matter and sand	.88
	103.77

The excess of weight is due to lime added to form bone phosphate of lime, by which the phosphoric acid of any guano is estimated. The phosphates of lime and magnesia, which enter so largely into its composition, make it a highly valuable guano, particularly in New England, where lime and magnesia (forming such essential component elements of the different grains) form only about 3 per cent. of the constituents of the soil. The ammonia acts as a stimulant; and the Chincha Island guano, which has a very large percentage of this element, owes its chief excellence to this, as will be seen by the analysis:

Ammoniacal salts	40
Animal organic matter	6½
Sulphate and muriate of potash and soda	11½
Phosphate of lime and magnesia	29½
Sand	1
Water	11½
	100

Ammonia acts on the vegetable as brandy or other stimulant acts on the human system. It vitalizes an exhausted soil, stimulating its electric forces with almost miraculous energy, and hence the wonderful results of the Peruvian guano. The ultimate effect, however, like all other stimulants, is to leave the land more exhausted than before; as the vital powers of a sick man sink more hopeless than ever when the stimulant ceases to act. To renovate the prostrate energies of the patient, more substantial nutriment is needed, and if the stomach can bear it, recovery slow but sure is at hand. Now, in the case of Baker's Island guano, it supplies nutrition in the shape of phosphates, while it has enough of ammonia to ensure a sufficient degree of stimulus. I have seen corn and wheat grown side by side, with Baker's Island guano and the Peruvian, and that from the latter was the best, by one-third. The great superiority, however, which the Baker's Island possesses, will be found, if I am not mistaken, in its more lasting effect. The second and third years will show its effect to great advantage, while it is the experience of all, that the effect of the Peruvian guano does not appear after the first year. A series of experiments is now being made in different sections of the country, which will give to agriculturists some valuable results.

PLOW BOY.

For the New England Farmer.

FRUIT-TREE BORERS.

MR. BROWN:—I notice in your last number, inquiry was made in relation to the fruit tree borer. My experience, though of but one season, may be of some value. Last year, in March, and before the snow was off the ground, I found the borer at work in my little orchard, turning out his gimbletings. I began immediately to follow him up by various experiments of punching with wire, whalebone, &c., and cutting him out, or sometimes plugging him in. In several instances during the season, I found nine and twelve in a tree, small ones, I think in the month of July. I continued the war of extermination until October; then I raked away the sand around all the trunks, cut off all the small fibrous roots and suckers, cleared off all the dead bark and other decayed matter, and taking undiluted whale oil soap, rubbed it on with my hand from the ground up as far as I could reach among the limbs, and so let it remain during the winter. This spring my trees look beautifully, full of foliage, abundant in blossoms, and a fair set of fruit; bark perfectly smooth where the soap was on, and the limbs clean and vigorous. Up to the 1st of June I discovered no insect except one nest of caterpillars. The first borer between the first and tenth, and more recently three or four more, half-grown ones in the bark only; the first was about one-eighth, the last about three-eighths of an inch long. They are now just beginning to bore the wood, and rather concluding that soap will destroy them, I have again applied it round the trunk near the ground, about six inches up. Some of my neighbors say these insects cannot live without air; and others, that common bar soap is as good as oil soap. One thing is certain in my mind, oil soap, undiluted, will not hurt the tree, at least, the first year.

GUANO.

I have been often inquired of in relation to the danger of using guano. On this subject, I would

say, I was at the Chincha Islands three months; there were probably from three thousand to four thousand seamen and others engaged in the labor of digging guano and transporting it to the ships. It is often a hazardous business, in which men are marred and wounded almost every day; they live in its dust, and inhale it freely, and often use it as soap to wash with, without regard to sore hands, and sailors and laborers are always wading about in it without regard to sore feet, and yet I never heard any complaint of its dangerous tendencies or effects.

BUGS ON VINES.

Equal quantities of flour and black pepper mixed dry, then wet the leaves and sprinkle with the dry material, has proved with me a positive exterminator. NATHAN BRIGGS.

Marion, July 17, 1857.

MR. FRENCH IN ENGLAND.

In the "*Mark Lane Express,*" published at London, we find an account of a recent meeting of the "*Suffolk Agricultural Association,*" held at Ipswich, England, which was attended by many distinguished agriculturists of that country, by a "representative of one of the most distinguished families of Austria," and Mr. FRENCH, one of the editors of the *Farmer.* There had been a show of cattle and horses, which was followed by a dinner, much like our own custom in similar gatherings. At that dinner, however, a large portion of the time was spent in toasts to the Queen, army, Prince, navy, and individuals, most of which was entirely inappropriate to the occasion. Mr. French's speech seems to have "set the table in a roar," and established general good feeling. He was called out as follows:—

The PRESIDENT gave the healths of the distinguished foreigners who had honored the meeting with their presence. (Three times three.)

The Hon. H. F. French said: My Lord and Gentlemen, it must be hard indeed if I could not respond to such a welcome as this. I am called upon to respond to the toast drunk to the strangers present; but were it not for the word uttered by my hon. friend, I should forget that I was a stranger in a strange country. It is true that I have come three thousand miles from my own home, alone, with no excuse of business, and with no object before me but to see the people of Old England—especially the agricultural people. I have the honor to be a vice president of the United States Agricultural Society, and the president of the society in the county of Rockingham, in the State of New Hampshire—a similar association to the present one. I have also the honor to be the bearer of a letter of introduction given me by a vote of the United States Agricultural Society, at their annual meeting at Washington, last January, introducing me to agricultural societies abroad, and asking them to give me a cordial welcome. Upon the presentation of that letter to the officers of this Society, I have received a welcome such as I have no doubt you will receive if you should return the visit I have made. I have received, from the time that I first set my foot upon English soil, nothing but kindness at the hands of strangers. The very first gentleman I met, in coming by the train from Liverpool to old Chester, took me by the hand, when he knew me to be an American, and invited me to Lincolnshire; and when I leave Suffolk county, I shall proceed on my way to Lincolnshire, to fulfil the invitation. A stranger, gentlemen! I can hardly feel that I am one in any respect. I have walked down to Westminster, and read there the inscriptions in honor of your literary men—Chaucer, Milton, Shakespeare, Addison, and a thousand other brilliant stars in literature; and I have felt, my lord and gentlemen, that this was not only English literature, but American literature too. Their names are household names in America, as much as they are in England, and we do not forget them when we speak of our literature. (Applause.) From Westminster Abbey I went into Westminster Hall, and there I saw the wigs and gowns which we have laid aside, as not being practically necessary to the administration of our laws (laughter;) but apart from these matters of form—which may as well be laid aside according to our republican notions—there was nothing to make me forget, even in a court of justice, that I was not at home. The English common law is the foundation of our jurisprudence, and we cite now the latest decisions of your courts, not as binding authorities, but as the best expositions of those principles which lie at the very foundation of our administration of justice. I am myself connected with the administration of the law—you know a Yankee generally has three or four matters on hand—but I say that, even in your courts of justice, if certain ornaments were laid aside, I should hardly know that I was not at home. As to your form of government, I have nothing to say. It is probably the best government for Englishmen, although I should be very sorry to say that we have not a much better one in our own country. Probably there is no desire on the part of any of you, to give us any other; but, after all, there is a great deal of good sense in the lines of the old poet, though I never could see much poetry in them:

> "For forms of government let fools contest;
> That which is best administered is best."

There are, however, weighty differences between the habits of the people of the old country and the new. The expression is a solution of the matter, for one is an old country, and the other is a new one. In Old England you have the grand old estates, the grand old parks, the grand old trees, and the grand old landscapes, which nothing but time can make. We have, instead, the primeval forest—trees towering up by hundreds and thousands of acres—a very different thing from the landscapes of England. There is nothing, however, next to the countenances of your people, upon which I so love to dwell as an English landscape. (Applause.) There are those marks of permanence and good living around you, which cannot be the work of a day. It takes centuries to grow such a country as England, and no new country can compare with it. Your habits of life are also different. This country, if I may use a homely expression, is like a well-to-do gentleman in middle life, who has made his fortune, and sat down under his own vine and fig-tree to enjoy himself; while America is like a young stripling, barely out of his time, who has gone out

to seek his fortune—full of the spirit of unrest, uneasy, anxious for change, desirous of doing something else besides what his fathers have done, and desirous of trying all sorts of experiments. This is the paramount and marked distinction between this country and our own. This is a conservative country; ours is a country that has no conservatism—I had almost said, if we had the best thing, we should want to try and see if there was not something better. (Laughter.) The Englishman, when he builds a house, lays the foundations deep, and calculates, not only for his own time, but for his son, and for his children's children, down to remote posterity. He supposes that they will live upon the same acres, and in the same house; it is not so with us,—a man who builds a house goes out west. He buys his land for a dollar and twenty-five cents, or 5s an acre; for that sum he takes the fee-simple from the government, and buys the land for himself and his heirs forever. He looks around, with his axe upon his shoulder; he sees the forest, and without thinking anything about beautiful shades and lines of trees, he considers how he shall get a crop off the land for himself and his children. He lays about right and left, and makes a clearing. He chops the trees down, if he has time, and if has not time, he cuts the bark off, so that they die, and digs in his Indian corn. Corn means nothing in my country but Indian corn; if we mean anything else, we give it some kind of a Christian name. (Laughter.) Well, he digs in his Indian corn; the roots don't trouble him, and in ten years' time—if he is a good smart man, and if fever and ague don't assail him—he gets enough, not only to support himself and family, but also money enough to repay every dollar he paid for his land. This is his house; but he does not stop there. You will think he might be content, but no; a village springs up around him—other people from the east arrive—a school-house and church are built—here people collect around them, and the village becomes a city. Let me state a fact or two with regard to the city of Chicago. The city of Chicago lays at the bottom of Lake Michigan, and twenty-one years ago it was a wilderness. In 1850, there were 38,000 persons in Chicago; in 1855, when the census was taken, there were 88,000 people in it; and now, in 1857, it is thought, if the population were enumerated, that there would be found to be more than 100,000 persons where, twenty-one years since, there was not a habitable dwelling. The man who went out close to the city of Chicago and planted his wheat-field there, of 100 and 200 acres, now that his land which cost one dollar and twenty-five cents, is worth £25,000 an acre does not, of course, cultivate wheat nor grow Indian corn there, but he sells out on speculation and goes west. Chicago is only the beginning of going west—and he starts and founds a city somewhere else. This is not exactly like the stationary system of old England. It is a kind of life which you have no idea of, and yet, it is the common life of western settlements. This spirit of unrest, as it may be denominated, has its good and bad sides. Its good points are, that it peoples, civilizes, Christianizes, and enriches the world; its bad points are that home influences are not regarded, and are not felt as they are in a more stable and older country. I am afraid, my Lord, that I may be tedious. (No, no.) Perhaps in our agriculture you would see a wider difference than in any other point. You would see the difference between the old and the new; you would see, in short, the difference between system and no system; for it is just exactly that. The fact is—and I am willing to proclaim it, when I go home, upon the house-tops—you understand the business of farming, a good deal better than we understand it in our country. We have much to learn of you; and this is my mission, to try and learn something (applause.) If a man could buy as good land as the sun ever shone upon for 5s an acre, you would not expect him to lay out £5 upon an old acre to make it half as good as a new one. But the fact is, that thousands of acres of the lands taken at the government price of 5s an acre, have been planted 30 years with Indian corn and wheat, without the crop perceptibly diminishing. They are bottom lands, where probably rivers once flowed, and are called river-bottom lands. But even these soils may become exhausted in time. And we have found in New England, where we have been 200 years, (a long time for America) that in our old fields the system of taking everything off and putting nothing in begins to fail. We find we must apply manure, if we wish to get any crops, and we are looking anxiously round to see whether we can stay there, or whether we must go west and desert the works which we have been two hundred years in rearing. It is by a careful observation, I think, of the agriculture of this country, that we must profit more than in any other respect.

In passing over your grounds to-day I noticed at every step the difference between the old country and the new. Every one of the implements which I observed here marks this difference. Your implements are of perfect workmanship. I have been in the warehouse of my friend, Mr. Ransome, where many of them are made, and I see there is a great deal of fine workmanship in your implements, and that they are made far more expensively and durably than implements are with us. Why is this? Because you believe that you are perfect in your agriculture. But take your plows. Our plows are about as much like yours as they are like a spoon. I asked a gentleman what was the weight of one of your plows, and he replied 280 lbs. This was a plow for two horses; and a plow in my country, such as we work with three yoke of heavy oxen, equal to six horses, is of such a weight that one workman can walk off with it very comfortably. (Laughter.) I have seen it done hundreds of times; and yet such a plow will not readily break. I do not know how your plows may act in your land, but they would be old iron in ours in about five minutes. (Laughter.) It does seem to me that, with regard to agricultural implements, you gentlemen may learn something of America yet. I was glad to see McCormick's reaper upon the field. It looked American, and it appeared to indicate that you were looking a little that way, and seeing whether you might not learn something from us. No doubt your implements are better for your own soil, but I doubt whether they are better for ours. I shall go home and report upon these matters, and I am endeavoring to look upon things candidly to ascertain what is best, and what we can carry away that may be useful. We are indebted to you for much. We are importing some of the best stock that we find in the country here. We send our agents, who come and take away the best bulls and sheep and everything else they can find. Plenty of Indian

corn will raise a good animal as well as anything else under the sun; and if you will attend the agricultural show of our United States Agricultural Society at Louisville, in Kentucky, you will find that we shall show as good short-horned stock, according to our notions of goodness, as ever you saw upon the earth. There are different ideas as to what constitutes a good cow. I was told this morning that a certain cow was a beautiful one, and I asked "Does she give a good deal of milk?" The answer was, "Well, I don't know." I asked, "Will her stock give a good deal of milk?" "Well, they may or they may not." Now, I want a cow that will give milk; if she won't give milk she is good for nothing, and I don't care how short her horns are. (Applause.) As I have said, there are some things which you might gain by visiting us. If you were to come over and attend the shows of any of our county societies or United States Society, you would see that it is usual for us on all festive occasions to bring the ladies with us. If there were ladies now, I should have more freedom in making a speech, for it is more awkward talking to men alone. (Laughter.) I have alluded to many differences which exist between the manners and fashions of the old country and the new; but I think upon one point—and I say it with sincerity—there is no difference of feeling between Americans and Englishmen. Whatever brawling politicians in either country may say—whatever editors of newspapers, who like to make themselves conspicuous, may say to the contrary—I maintain that the people of the United States, taking the rank-and-file of the country throughout, entertain the most friendly feelings towards Great Britain. So far as I have been able to judge from my intercourse with Englishmen, the same friendly feeling appears to pervade the people of Great Britain. The sentiment of the people of both countries seems to be that it would be most unfortunate if anything should occur to disturb the harmony between the two nations; and I cannot close my observations more appropriately than by saying "The harmony which exists between Great Britain and America—may it be perpetual." (Loud cheers.)

DRESDEN WARE AND ITS DISCOVERER.

The discovery of the celebrated Dresden ware accidentally grew out of the credulity of Augustus the Strong, Elector of Saxony, in the transmutation of metals. It was made at the beginning of the eighteenth century. An apothecary's lad named Bottiger composed a tincture that was supposed to be capable of being transformed into gold, and he acquired such a reputation as a successful alchemist that at the age of seventeen he was seized by order of Augustus and placed under lock and key, with a complete laboratory at his disposition. This restraint almost drove the vivacious youth into insanity. The keeper of the fortress (Konigstein,) where he was confined, reported in April, 1702, that he "foamed at the mouth like a horse, roared like a bull, knocked his head against the wall, creeped with his hands and feet, and trembled so violently that two soldiers could not hold him; he believed the commandant to be the Archangel Gabriel; he blasphemed, and drank twelve cans of beer a day without getting drunk." After this he was taken to Dresden, where he was allowed partial liberty, billiards, private walks under control, a court equipage, and certain safe persons for his companions. While pursuing his experiments, Bottiger accidentally discovered that description of porcelain commonly called Dresden China. This, to Augustus, who was a great China fancier, was almost as welcome as gold itself. The ware soon became famous. Bottiger thenceforth had access to the king as often as he chose, and received from him a ring with his effigy, and credit with the royal banker. In 1715 he obtained not only his full liberty, but the profits of the porcelain manufactory established at Meissen, for life. Drunkenness, however, probably brought on by solitude, had so mastered him that he at last drank half a dozen bottles of wine a day, and died, at thirty-four years of age, of his excesses. Bottiger was a person of most engaging manners, and enchanted all who came in contact with him.—*Boston Journal.*

ODE ON SOLITUDE.

POPE'S talent for versification showed itself very early, as he wrote the following when he was only twelve years of age. His observation of men and things, and his knowledge of the human heart, must have been very remarkable. This little poem has much poetic merit, and its sentiments are sound and wholesome, with the exception of the last verse. It is an error to believe ourselves, or teach others, that it is best to live unseen, unknown, or to die unlamented. The Creator has not so constituted society, or made up the human affections. It is best to live *in the world*, and be *useful to it*, and when we have so lived it is natural and proper that there should be sorrowing hearts at our departure. Something of this sentiment tinged many of the subsequent writings of the great poet, the child foreshadowing the man.

If this youthful error had been judiciously managed as soon as discovered, what might have been the effect upon his life and writings can, of course, now only be conjectured, but we think it would have given them quite a different tone.

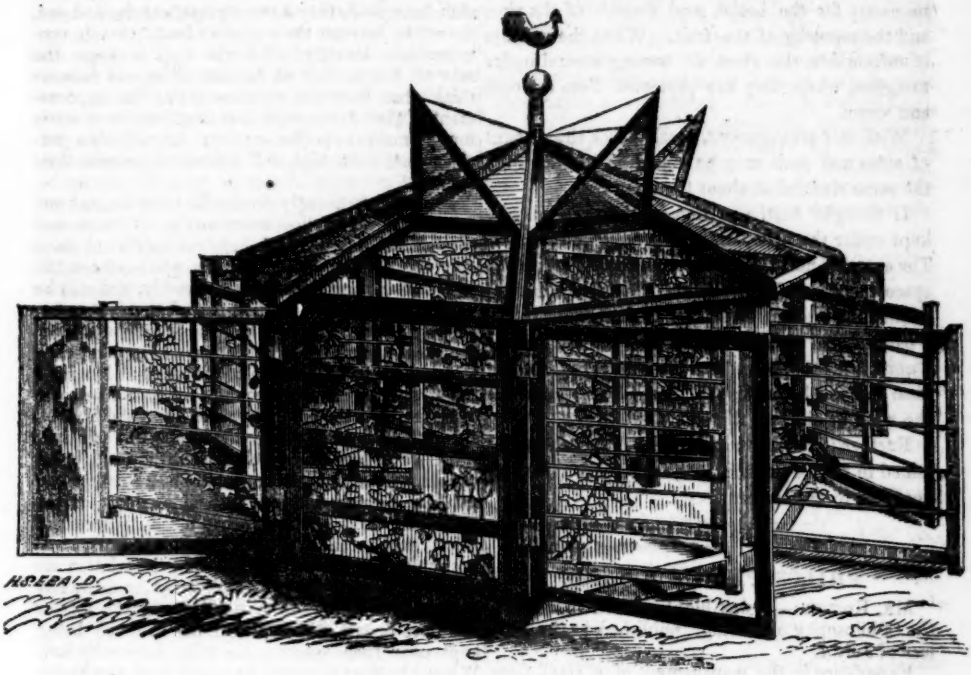
Happy the man whose wish and care
A few paternal acres bound,
Content to breathe his native air
In his own ground.

Whose herds with milk, whose fields with bread,
Whose flocks supply him with attire;
Whose trees in summer yield him shade,
In winter fire.

Blessed who can unconcernedly find
Hours, days and years, slide soft away,
In health of body, peace of mind,
Quiet by day.

Sound sleep by night: study and ease,
Together mixed; sweet recreation,
And innocence, which most does please,
With meditation.

Thus let me live, unseen, unknown;
Thus unlamented, let me die,
Steal from the world, and not a stone
Tell where I lie.



GRAPE VINE PROTECTOR.

The above engraving represents a vine protector, patented April 15, 1856, by Abel H. Grennell, of Springfield, Vt., for raising choice varieties of grapes, such as cannot be matured in our climate without protection. This is in the form of an octagon, but may be square, or in any other style, to suit the taste or means of the builder. This one has eight sides, with a post six inches square at each corner. Sills and plates; there is a space of eight feet between the posts; the plates are eight feet from the sills. In the centre of the building is a post, one foot square, set firmly in the ground, and twelve or fourteen feet high. At each corner is a rafter, one end of which is fastened to the plate directly over the post, the other to the centre post, three or four feet higher than the lower end. By this means the building is firmly braced and strong. The sash for the roof is made to correspond with the space between the rafters, the lower end being eight feet wider, the other running to a point at the centre, and fastened to the rafters with screws.

The house may be ventilated by having a joint in the sash about three or four feet from the top, to be raised as in the figure; or some other device may be used, equally as good and convenient for purpose of ventilation. The sides are made of glazed sash doors, two in each space, hung to the posts, and closing in the centre of the space against a temporary standard, set for the purpose, which is to be removed to swing the vines into the open air. The cut represents only one door for each space but it is more desirable to have two. The northerly sides may be constructed of wood, instead of glass.

The frames upon which the vines are trained are in the form of a gate or swinging trellis, nearly eight feet square, light, but of sufficient strength to support the vines when swinging in or out. There are two of these frames in each space hung on the same posts, and inside of the glass doors; and so arranged as to swing out through the open space so far, that when open, the ends will be about five feet apart. When closed, there are two rows of frames and vines round the interior of the building. The vines are planted near the hinges, and trained along the bottom of the frame or trellis; from this arm, canes are trained up in sufficient number to fill the frame.

The advantage of this protector over the old form is, that the vines are trained upon movable

frames or trellises, hung on hinges, so as to swing out into the open air in warm, favorable weather, when they need no protection, where they receive the full benefit of the sunlight and air, which are necessary for the health and growth of the vine, and the maturity of the fruit. When the weather is unfavorable, the vines are swung around under the glass, where they are protected from the cold and storm.

With this arrangement, nearly twice the amount of vines and fruit may be raised in a building of the same size and at about the same cost.

If thought best, a portion of the vines may be kept under the glass, while others are swung out. The extreme north side is boarded up tight; in the space each side of this is but one door, which is hung to the north post, and swings back so as to be on a parallel line with the north side, and answers as a north wall to protect the vines in some measure from the north winds; the glass doors also break the wind in different directions.

Further information and explanation may be obtained in regard to the cost, construction, &c., by applying to the inventor.

For the New England Farmer.

PHILOSOPHY OF HOEING.

MR. EDITOR:—I was highly edified in reading the "Philosophy of Hoeing," published in the *Farmer* of July 4.

Experience in the management of a small farm and a still smaller garden, had long since taught me the great benefit arising from frequent hoeing and stirring the earth around plants, even after the weeds were eradicated, but never, until after reading the article to which I have alluded, was I able clearly to explain the "why and the wherefore."

And now, if you or some of your philosophical agricultural contributors will publish the philosophy of *rolling*, and explain in what manner the roller tends to "prevent the soil from regaining its natural solidity, and how it subdivides the particles of earth so as to present innumerable interstices or crevices into which the young rootlets may penetrate and extract their daily food," I for one shall be thoroughly posted. SENEX.

REMARKS.—We use the roller for three purposes.

1. To level mowing grounds that have been thrown by the frost, so as to make them uneven in the spring.

2. To crush lumps which remain after harrowing lands to be laid down to grass.

3. To press the light earth a little more closely about seeds just sown, so that they will germinate more rapidly, as observation has shown us that when the feet of the horses or oxen press the soil closely about the grains of wheat, barley or oats, they are the first to come up. Perhaps some of our readers can add other important advantages to be derived from the use of the roller.

For the New England Farmer.

FALSE ESTIMATE OF THE HAY CROP.

Some farmers judge of the hay crop by its bulk. They think that, if their barns are well filled by an abundant yield, they have a great supply, and can, therefore, increase their stocks of cattle for its consumption. Usually, when the crop is large, the sale of hay is dull at harvest time, and farmers think that they will consume it for the improvement of their farms, and that they may have cattle for the market another season; and will often purchase cattle at high fall prices, to increase their herds.

It not unfrequently occurs that our longest and severest winters follow seasons of great crops, and the hay not having much heart or nutriment in it—it being more bulky than nutritive—the cattle will devour large fodderings speedily, and still be poor in flesh, and unsatisfied. And then not unfrequently, the farmers who had the fullest barns, and the greatest number of cattle, have been compelled to purchase hay, sell some of the stock at low price before spring, or before pasture time, or lose some of them. On the contrary, when the yield is light, the scaffold not being well filled, men will sell their stock or reduce it. Such seasons, hay will bring a good price at harvest time, and stock small prices.

Some farmers will sell their stock down, or decrease it; and hold their hay for an advance in prices, when the harvest is small, not bulky. It not unfrequently occurs, also, that the winters are mild and open, following small crops, and the hay being fed sparingly to a small stock, the farmer will have to sell in the spring; but so much being kept over such seasons, the price is usually low. When the crop is small, the quality of the hay is very much better than when the yield is abundant. The cattle are satisfied with small fodderings, and are in better condition than when kept on grass of a rank growth.

Farmers could tell better what amount of cattle their hay would support—the weather being the same—by weighing it, than by measuring it by the scaffolds or stacks. One may have as many pouuds of hay when the grass is of small size, as when of rank growth. Having the platform scale in the floor-way of the barn, it would not be much trouble to farmers to weigh their crops. In that case, they could tell, by reserving a scaffold for the market, the shrinking of hay in different seasons, and could tell when it was more profitable to sell it.

Hay, if possible, should be well cured. It is better to give cattle good fresh hay, and let them eat salt when they desire it, than to compel them to eat salt when they do not need it, by salting their fodder. When the weather is good, the hay should not be mowed till after the dew is off the grass; and after moving it often with the turning fork, it should be raked up and covered with caps, before the dew falls (by three o'clock, P. M.) The following day, the hay should be spread again, after the dew has evaporated, and being well turned again, before the dew falls it should be housed.

P.

☞ Dr. Charles T. Jackson, of this city, is in Washington, making arrangements to carry out the plans of the agricultural bureau in regard to the chemical analyses of the best soils and most important productions.

For the New England Farmer.

WHITEWASHING TREES.

MR. EDITOR:—I must take exceptions to your remarks on the subject of whitewashing trees, and I base them both on theory and observation. You compare the bark of a tree to the skin of an animal, and say that "their functions are analogous." I acknowledge the analogy in one respect, they are both on the *outside* of the individual, and that is the only resemblance between them. There is no office performed by the bark of a plant or tree which corresponds with that performed by the skin of animals; at least, no such function has ever been demonstrated to exist, and it would be very easy to ascertain if it absorbed carbonic acid or gave off oxygen. We read that the rootlets and leaves are the essential organs of nutrition in vegetables, the latter performing the same offices as the digestive organs and skin in animals; that water and the earthy or mineral (inorganic) constituents are absorbed by the roots and carried to every part of the plant; while carbon is absorbed by the leaves, which exhale water in the same proportion in which it is absorbed by the roots. By the agency of light, the leaves decompose the substances in the sap which contain oxygen gas, that portion not required in the growth of the plant is returned to the air, and the remaining elements at the same time arranged so as to form peculiar organic products, as starch, liquor, chlorophylle, sugar, gum, &c. This is the function of the leaves especially; and it is also performed to some extent by all the green part of plants, as the cellular, outer bark of herbs; in the cactus and some other plants destitute of leaves, the whole function of nutrition and excretion is performed by this tissue, but this is not the case with trees; no vital or important function, whatever, is performed by the bark, except that in its inner portion a layer of woody and vascular tissue is deposited, chiefly in the form of tough woody fibre, constituting what is called the *liber*, or inner fibrous bark, resting directly on the wood. The green layer or cellular envelope, (or the inner bark,) may, and doubtless does perform the same function as the leaves, in herbs and perhaps even in branches and twigs of a year's growth; but such twigs are not whitewashed.

You speak of "filling the pores of the bark, and thus effectually preventing the action of the atmosphere, and arresting the internal action also." Now, as the only function of the bark is protection, and to serve as a deposite of fibrin, no such injury can possibly result from covering the outside even with an impenetrable varnish. But, allowing your reasons to be well founded, which I think have no foundation in the laws of vegetable physiology, *whitewashing* would not form a coating which would prevent the access of atmospheric air. Indeed, lime thus applied forms no obstacle whatever to the absorption or extrication of gases, (admitting that the bark has any such function;) indeed, it absorbs carbonic acid gas in large quantities, the very substance which is absorbed and digested by the leaves; and if your statement in regard to the functions of the bark was correct, then I should advise the application of whitewash as an important aid in the growth and nourishment of trees. The fact is, that many of our trees are covered with bark far more impenetrable to the air than whitewash; indeed, sufficiently so as probably wholly to exclude it, as the canoe birch (*betula papyracea,*) and many others.

Let me assure you, Mr. Editor, that you are misinformed with regard to the fatal effects of covering trees with cotton cloth dipped in grafting cement or a coat of tar and Spanish brown—no less than you are mistaken in regard to the effects of whitewash." The morbid action of the cutaneous vessels," and the "torpid circulation," with the "consequent derangement of the functions of the entire system," these, depend upon it, exist only in your imagination, I apprehend. The late Judge Buel, of this State, one of our successful fruit-growers, was partial, I believe, to whitewash for fruit trees; so is Dr. Fitch, the author of our State Report on "Insects Noxious to Vegetation," and so was the late Dr. Harris, of your State, a naturalist who scarcely had a superior.

In conclusion, I will state the result of an experiment performed during the present season. I had about a dozen peach trees of four years' growth, which leaved out well, and seemed remarkably flourishing till the last week in May; then the leaves began to turn yellow and crispy, curling up as if infested by insects, and finally to die. The trees were well covered with whitewash. The first leaves nearly all perished and fell off, but a new crop succeeded, of a deep green, healthy color, and vigorous growth, and now, (July 6th,) the trees look as flourishing as ever. I believe that whitewash saved them, but if you can give any more rational explanation, I shall feel obliged. Your recommendation of soap-suds is good, but for one, I prefer a good coat of whitewash. C. A. L.

Peekskill, N. Y., July 6, 1857.

REMARKS.—We have given our views, heretofore, of whitewashing fruit trees, and they are not materially changed by the statements of our correspondent; indeed, we could substantiate them by the writings of some of the ablest writers on vegetable physiology and botany, which our State affords. If there were no other objection than *the appearance* of a whitewashed tree, we should avoid it.—We should as soon think of whitewashing a new baby as a young fruit tree.

For the New England Farmer.

DO ROOTS OR TUBERS MIX?

FRIEND BROWN:—You will recollect that a few weeks since, a communication appeared in your paper, headed with the inquiry, "Do potatoes mix?" In reply to it, the writer used the following words: "Some say they do, and others that they do not." In the inquiry put, "Do turnips mix?" the purpose was to show the absurdity of the notion maintained by some, that the tubers of the potato plant do mix after they are planted. This I do not believe, any more than that the napiform root of the turnip mixes with its neighboring roots.

What led me to the conclusion that your correspondent—notwithstanding what he said of another condition—believed that tubers mix in the hill, was his reference to Indian corn: "Does corn grow on the tassel?" he asks. "No! it grows below it, sometimes several feet; and if *corn will mix*,—which no one will deny—why do not potatoes mix? What possible reason to suppose they do not?"

Potatoes are propagated both by planting tubers

and seeds; somewhat analogous to the propagation of sugar cane, currants, &c., by cuttings. Here like produces like, and will so continue unmixed, so long as these conditions are observed—there being thus no means for changing the variety of roots or cuttings. "Hence the idea," as I stated, "that roots and tubers mix, is without the slightest foundation. As corn can only be mixed by the pollen falling on the stigma, thus fertilizing the ovule; so of the potato, the turnip, and all tubers and roots" —it not making the slightest difference whether the species under consideration, be annuals, biennials, or perennials, so far as mixing is concerned. It is by mixing the pollen of varieties that hybrids are produced, and multiplied indefinitely, as stated in my communication of the 18th inst., it not making the least difference relative to this physiological law of propagation, whether the pollen comes from the flower of an annual, biennial or perennial. The mixing takes place in the ovules, or plant germs, at the time of flowering, and not in the roots nor tubers, as I said in my former communication, to which the reader is referred. I do not yet see how the reader can get a wrong "impression" from this view of the subject. L. W.

LETTER FROM MR. BROWN.

COUNTRY RAMBLES.

Chester, N. H., July 13, 1857.

DEAR SIR:—I find my rambles delightful—the country is still fresh and green, the July suns not having yet overcome the influences of the spring and early summer rains. Vegetation is now progressing rapidly; corn is low, but looks quite as well as in the region about Boston; spring grains promise well; the potato crop never appeared better; there is little fruit of any kind, and although this vicinity usually produces large quantities of very fine apples, there will scarcely be as many as there were last year. There was a generous blossom, but that implacable destroyer of fruit, the curculio, has visited nearly every apple, and left upon it the germ of its destruction. What is to be the result of the operations of this insidious foe? Is the whole apple crop to be exterminated, together with most of our other fruits, or will that good Being who has provided for us, as well as them, put it into the head of man to devise some way to arrest that calamity, or himself check their onward career of devastation? I have recently spent some fifteen days in the tops of apple trees in, pruning and shaping, and have carefully examined the young fruit, and in going over some four or five hundred trees I did not find *one dozen* apples left untouched by the curculio! There was the unmistakable evidence of his visit in the crescent-shaped puncture, and the egg nicely sealed over with gum, while the ground beneath the trees was strewed with unnumbered scores of the fallen and slain. It is impossible to gather all the fruit that falls, as thousands of trees are in grass ground, and in other places where collecting would be impracticable.

To-day there is a general commencement of the hay-harvest in this region. The shoe-maker is called from his seat, the smith from his anvil, and the storekeeper from his counter and ledger, to assist in securing it, and it is considered of so much importance, that the custom of inviting the young women into the fields is not entirely abandoned. It is certainly pleasant to see them sometimes thus occupied, and the employment is not unbecoming, as an occasional help and encouragement to the father and brothers. Hay will be abundant, and the price must be reduced. Will it affect the high price of corn and of flour?

Lounging the hot noon away in the cool store of Messrs. RICHARDS & GREENOUGH, both cultivators, and zealous in the cause of agriculture, and active friends of the *N. E. Farmer*, we discussed many interesting matters relating to the farm. These discussions elicited some remarkable facts. Many years ago, they stated, a considerable portion of their trade consisted in an exchange of their goods for nearly all the products of the farm; all the grains, and butter, pork, lard, &c., were a quick currency. But this sort of barter has nearly ceased, butter and eggs being nearly the only articles presented. About the same quantity of corn, wheat, rye and barley is raised now, but a much less amount of oats. Most of the farmers then raised the corn and wheat for the family, with the exception, perhaps, of a single barrel of flour, during the year, purchased at various times, when the Thanksgiving or some other pies demanded flour supposed to be finer and whiter than the home-made article. Now they state the remarkable fact, that, without any increase of population, and with nearly the same quantity of grain, there is annually sold in the town *twelve hundred barrels of flour!* and that they, alone, sell about *four thousand* bushels of southern corn meal! The population of the town is thirteen hundred, so that here is about one barrel of imported flour, and a little more than three bushels of meal, for each individual in the town! I ought to state that there is not one-half the quantity of potatoes or oats produced that there was twenty-five or thirty years ago.

Now what becomes of the grain and flour they formerly produced? It is not sent to market, because no profitable exchange could be made with it for corn and flour again. This is a question which, if properly answered, would show some radical and important change in the rural population of all our New England towns. The amount of flour for this town—large as it is—is probably not more than the average will be in all the towns of the New England States.

What would become of us without the South and West? The bread question alone, if there were no higher consideration, ought to make us placable and just towards our Southern brethren, and cause

us to send aid and comfort to our sons and daughters who emigrate to the West.

Passing a field this morning, where the haymakers were at work, belonging to Mr. EPHRAIM ORCUTT, who for many years kept a public house at the old "Lord Timothy Dexter" stand in this town, I was attracted by the height and thickness of the grass. The mower was rather a short man, and many of the heads of herds grass were even with his shoulders, and most of it was as high as his arm-pits. The field contains an acre and three-quarters, and Mr. O. stated that he should get as much hay from it this season as many persons in the town would cut on *twelve* acres! and this same statement was made to me by another gentleman who probably knows every farm in the town. The secret of this crop was manure, and proper cultivation.

But I must close, the shadows are lengthening, and the plaintive whip-poor-will and early cricket are ready to lull me to repose.

Very truly yours, SIMON BROWN.

JOEL NOURSE, ESQ., BOSTON.

For the New England Farmer.

PREJUDICE AGAINST AGRICULTURAL PERIODICALS.

"The learned is happy nature to explore;
The fool is happy that he knows no more."

Strange as it may appear, there are yet a large number of farmers in the country, who rely for any further addition to their stock of professional information upon their own experience, or mere accidental hearsay. They are possessed with a spite against agricultural newspapers; or they cherish an incorrigible prejudice against printed matter! And this feeling is only equalled by their credulity towards the dicta of their neighbors. They seem to believe that the publishers of such works only wish to get their money and deceive them; and if some of them should happen to see some of their own real or fancied discoveries in print, they might be tempted to doubt their truth! Agricultural facts with them, it would appear, can be spoken, but not written! Really, many of them would disbelieve the *printed* Bible, had not their parents instilled its truth into them with religious awe!

Reading an agricultural paper in the cars a few days since, one of the above class of farmers looked over my shoulder, and very deliberately said,

"Take a good deal of money to carry all them notions out."

"Yes," said I, "but we must use our judgment, and consult our means and circumstances."

"My wife could never make anything out of them receipts," he added.

"Ah, but suppose *your* wife's method of cooking should get into the papers, what then?"

"Now, do you really believe all you read about potato-rot, fancy manures, bug-killing, &c.?" inquired my friend, seemingly anticipating my reply.

"No, perhaps not half; but it may be worthy of consideration; can you believe half what you *hear*, and are you not sometimes deceived in your own experiments?"

Speaking also with a friend about the curculio, he expressed the belief that the mischief was done in the flower.

"Why," said I, "that can't be so, for we can see the puncture on the surface of the young fruit."

"But did you ever see a curculio?"

"Yes, I have, and suppose I might see more if I should attempt to trap them?"

"Well, I never did, as much as I have examined plum trees; it's a newspaper story, I reckon."

"No, friend," said I, "it's the story of the tree itself, and by further experience, you'll find it to be so."

"Well, when I see a curculio on the fruit I'll believe it," said he, with an air of confidence.

Now here is an agricultural skeptic. He is disposed to doubt everything until it is made evident to his senses. Like a common animal, what he sees he'll believe, and is rarely guilty of a simple deduction of logic. "Seeing is believing."

If you go and lean over the pen of some veteran porker, and disturb his "balmy sleep" by a poke with a stick, he will get up and give you the grunt of recognition. If you inform him that the "bears are out," or some enemy in the field against him, he remains perfectly indifferent to the information, and can only believe it when he sees them. How little removed are some men from "His most Imperfect Majesty," the porker!

That there is a vast deal of knowledge lost to mankind from a want of a ready communication, every reflecting mind must perceive. A fact in science presented to a neighbor, will very probably spread to a considerable extent; but uttered by the press, it will never be lost to millions. And even the promulgation of mere opinions, not well supported by facts, cannot do much harm, and may do no little good; for many ideas are fruitful of a better progeny, as, by operating upon variously-constituted intelligent minds, something practical and useful is the result.

In regard to agricultural periodicals, like all other works of science, they do not always publish the truth; in fact, they do not pretend to, because it may not be known. But let the man without error "cast the first stone." Have we no traditonary falsehoods among us—no old, hoary-headed delusions which live upon ignorance, and which scientific publications are endeavoring to exterminate? Agricultural periodicals aim to reflect or disseminate the most accurate and economical modes extant of producing food. And this they really do, although that information is not always correct. Those individuals, then, who are disposed to decry such works, or the men who conduct them, should vouchsafe to let some of their own light from under a bushel shine upon them, for the sake of humanity and their own vocation; and if it is really light, they will gain the proper credit, and the journals will be more generally esteemed. D. W. L.

West Medford, July, 1857.

PROGRESS.—It affords us pleasure to observe that the venerable editor of the *Massachusetts Ploughman* reads the agricultural portion of the *Farmer* with some care. This is as it should be; for, although he is greatly our senior in years, and perhaps in experience, he has sufficient discernment to see, that, in the great variety which we con-

stantly offer from writers of acknowledged ability and practical skill, he can often gather something new and valuable even to him. The happy frame of mind in which he appropriates these crumbs to himself, is refreshing to contemplate!

For the New England Farmer.

HAY-CAPS.

MR. EDITOR:—At the risk of being considered fault-finding, I take the liberty of differing from the subscriber at Weare, in regard to the construction of "hay-caps," an article much needed, and as yet not extensively used by the farmers of New Hampshire. He takes upon himself the duty of impressing on the minds of all, in the briefest manner possible, a *new* method of constructing this article at a cost very much diminished from that sustained by the person or persons constructing them by any other method. Let us copy a few lines from the "quill." "Tear off pieces of common cloth, some a yard, some a yard and a quarter, some a yard and a half long. Turn up the edges sufficiently to form loops, which fasten with a common brass pin." These he calls "his arms and equipments," and furthermore says that the gude wife will take them after they have served an apprenticeship in the field. Now we are sorry to learn that the "quill" holds the farmers of New Hampshire, or of any other place, in so light estimation as to suppose that they would use an article constructed in so shiftless a manner, laying aside the utter uselessness of the attempt. Farmers living up to the good old maxim, that "what is worth doing is worth doing well," would not justify such a fabrication, nor could the arguments of the "quill" itself influence them to believe in its efficacy. Imagine that the hay is covered and enclosed (which, by the way, must be in very small cocks to be effectually covered by one yard, or even a yard and a half, of cloth) in the manner proposed. How long think you would it so remain, on the appearance of one of the many violent showers, which daily occur in New England? I think that his "arms and equipments" would be transferred to different quarters in a manner more speedy that was the idea of constructing such an article in entering the fertile brain of the "quill." And what use the "gude wife" can make of sundry pieces of cloth a yard wide, I am unable to conceive.

We have the following method for constructing hay caps, not wholly relying on our own responsibility as to its being a good way, but following in great part in the footsteps of Henry French, Esq., which method, I believe, is generally considered the best, in Rockingham County at least. It will show for itself. Stout cloth may be obtained at from eight to ten cents per yard; this made in caps two yards square, and having strong loops appended from each corner, and the whole neatly and firmly fastened by maple or any other sticks (made for the purpose) constitute our hay caps. Mr. French, if I mistake not, recommends a coat of paint or oil, as beneficial. This I have not tried. Hay caps of this kind may be kept by farmers from one year to another, neatly folded away, and suffering no material change from age, if properly taken care of. P. E. A.

Ossipee, N. H., July 19.

NATIONAL TRIAL OF REAPERS AND MOWERS AT SYRACUSE, N. Y.

The grand trial of Reaping and Mowing Machines, which was announced some months ago, and for which the several inventors, and proprietors of patent rights, have been busily preparing for some time, came off at Syracuse, N. Y., last week, commencing on Monday morning, the 13th inst., and continuing through the entire week. This trial has been the subject of a great deal of interest, not only among those particularly interested in the success of any one machine, but to the farmers throughout the country. The hay and grain harvests of the United States are of more value than all other products combined; and, as a large part of their value depends on the manner and time in which they are gathered, it is not strange that the success of machines for accomplishing this work speedily and thoroughly should be a subject of intense interest to all concerned.

On Monday, the first day of the trial, the several machines were congregated for examination at the fair grounds of the Onondaga county Agricultural Society, about a mile from Syracuse. The number of entries made with the Secretary of the Implement committee was thirty-eight Mowing Machines, twenty-nine Reapers, and twenty-two Combined Machines. Of the Mowers, three were from New England, twenty from New York, five from Ohio, three from New Jersey, two from Maryland, and the remainder from other States. Of the Reapers, three were from New England, ten from New York, and the others from other States. Of the Combined machines, fifteen entries were made of machines also on the lists of Mowers and reapers, four of machines also entered as Mowers, two also entered as Reapers, and one in competition for the premium for Combined Machines alone.

On Tuesday morning, when the trial was to commence, there were present about forty machines, and others, which had been delayed on the way, were reported from time to time. Other machines not connected with harvesting, were on the ground; among them a "Rough and Ready Cultivator," an "Ides' Grain Drill," Iron Gang Plows, &c. Of "baby reapers," as a wit denominated the models exhibited, there was a full assortment. At 11 o'clock President Wilder, escorted by a corps of marshals, under Chief Marshal Taylor, appeared on the grounds. The President was greeted, on alighting at the tent which bore his flag, by a large number of gentlemen distinguished in the various sections where they reside, as agriculturists or as politicians. Delegations were present from many of the State agricultural societies, and the press of all sections was well represented. The procession of machines now commenced, and after it had moved around the grounds, it was halted in front of the President, who delivered an address, setting forth the merits

of the use of machinery in agriculture, and particularly of those machines for harvesting, to test which the present trial was instituted. He instructed the competitors and judges in the duties expected of them, and enlarged upon the interest and importance of the trial about to take place.

After the address the class of "Mowers and Combined Machines" went in procession to a field of matted clover belonging to Dr. Calvin, passing through a decorated gate-way. It was escorted by the military, rather to the regret of the more *practical* farmers. Then came the opening contest of this mechanical tournament, nineteen machines entering. They started together, at the sound of the bugle, and presented a stirring spectacle, which was apparently appreciated by the thousands who lined the fences. In twenty minutes Ketchum's machine cut its acre, clean and smooth—in twenty-two minutes Wood's improved Manny machine had finished its work, and others came out soon after. Speed, however, is but a part of the test.

The field test Wednesday was probably the finest exhibition of Mowing Machines ever witnessed. The field was a level area of twenty-three acres, covered with a dense growth of timothy grass and clover, which was staked out in lots of about an acre and a quarter each. The machines were entered in classes of four, and almost every one performed its work admirably. The Ketchum machine, which is made at Buffalo, was rather the favorite, but the Manny, with Wood's improvement, had many admirers. Allen's New York machine worked to a charm, and it is conceded is one of the simplest and best in use.

Trials of the Mowing Machines with Bradford's Dynamometer and with Holmes's side draft guage occupied most of the day, on Thursday. Allen's Mower (the New York machine) was rather the favorite, as it was proved that the draft was light while there is no perceptible side draft. It does its work well, cutting wide and clean swaths, and is very easily managed, cutting closely around trees, fences, and other obstacles. The next favorite was Manny's Patent, with Wood's Improvement, which (like Allen's) is not a heavy burthen for the team. Other machines attracted much attention, and, as is usually the case, each had its admirers. The Heath Machine, which took the $1000 prize, offered by the Mass. society last year, proved a failure, from some unexplained defect in the construction, and was withdrawn after the trial on Wednesday. The trial of Mowing Machines closed on Thursday, the inventors being unanimous in commending the careful manner in which the examinations were conducted.

The Reaping Machines were severely tested on Friday, in a large and dense field of rye, which rather gave the hand-raker machines the advantage, as the automaton rakers are better calculated for the short and more erect grains of the prairies. One of the latter class is the invention of Pells Manny, of Illinois, the father of J. H. Manny, who invented the Mowing Machine which bears his name. The "Kentucky Harvester," which cuts a swath nearly six feet in width, worked admirably well, and the "Allen" Machine performed even better as a Reaper than it had as a Mower, proving its excellence as a "Combined Machine." "McCormick's Reaper" sustained its trans-Atlantic reputation, and cut up the face of a hill with admirable precision of movement.

On Saturday, the great industrial contest was over, having been terminated with a trial of all the Reaping and Combined Machines in large fields of rye and wheat, well calculated to display the powers of the various models, as the grain was rather green, and badly lodged in some places. Never has there been a more thoroughly demonstrated proof of the practicability of substituting machinery for human muscles in the harvest field; and it is stated that nearly five hundred machines of different patterns were sold during the week to the farmers who had come to see the show.

The result of the trial, as far as the judges' awards are concerned, will not be announced until the exhibition at Louisville, in September. We understand that the committees were made up with great care, and instructed to report upon every circumstance in regard to the construction of the several machines, their weight, material, dimensions, price, &c., and their reports will doubtless be full and accurate.

We are expecting an account of the trial from an officer of the society who was present, but as it has not yet reached us, we have compiled the above report from the excellent letters in the *Daily Journal*, and promise our readers a more complete statement when our friend's letter comes.

For the New England Farmer.

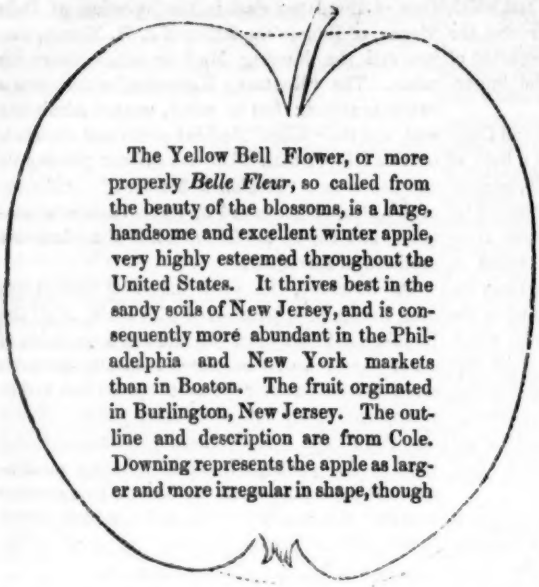
CHINESE SUGAR CANE.

So much has been said about the culture of this plant, that I have been anxious to see it in growing, promising condition. I have inquired of several who have planted seed, and been shown by them a feeble, diminutive looking grass, which they supposed to have sprung from the seed they planted; but no one seemed to have confidence that the plants would reach maturity, and if it did, that they would be of any value, under our chilling northern influences. The result may be otherwise—I hope it will. I should be sorry to have in our midst, so marked an instance of "a great cry and little wool"—though I have never had confidence that it was a plant fit to be grown north of Mason & Dixon's line. ESSEX.

July 10, 1857.

☞ The formation of a society in Essex county for the improving of horses is in contemplation.

THE YELLOW BELL FLOWER APPLE.



The Yellow Bell Flower, or more properly *Belle Fleur*, so called from the beauty of the blossoms, is a large, handsome and excellent winter apple, very highly esteemed throughout the United States. It thrives best in the sandy soils of New Jersey, and is consequently more abundant in the Philadelphia and New York markets than in Boston. The fruit orginated in Burlington, New Jersey. The outline and description are from Cole. Downing represents the apple as larger and more irregular in shape, though his description and estimate of its merits are the same as Cole's in other respects.

"Very large; long ovate-conical, irregular ribbed, mostly towards the eye; smooth, lemon yellow, generally a blush in the sun; stem long, slender, in a narrow, deep cavity; calyx closed, in a narrow, plaited basin; flesh tender, juicy, of a rich, sprightly, aromatic flavor. Latter part of Nov. to Feb. Good grower, moderate and constant bearer."

MILDEW IN THE GRAPE.—The blight, or mildew, is the operation of *fungi*, and the cause of the fungi is a *surplus of carbonic acid*, which gas would not exist as such, were there a sufficient supply of potash in the soil.

The grape-vine needs a large quantity of potash. In the appendix of Liebig's Agricultural Chemistry, it is said: "Under ordinary circumstances, a manure containing potash must be used, otherwise the fertility of a soil will decrease. This is done in all wine countries." Again: "One thousand parts of the pruned branches contain forty-six to sixty parts of pure potash."

We may now easily account for the fact mentioned by your correspondent, that, "old vines are much more subject to mildew than young." They have exhausted the potash from the soil, and when their leaves absorb carbonic acid, the plant has no potash with which to form a healthy salt by union with it, and the diseased plant invites fungi.

A humid summer is favorable for the generation of carbonic acid, and hence the reason why "T." found his young vines attacked during such a season. "T." is correct when he says, "the soap-suds is always beneficial, and can be used freely." The reason is, soap-suds contain potash. I should recommend very strongly the use of wood-ashes about grape vines, particularly in cold graperies.

WATER FOR CALVES.—Accident, says a correspondent of the *Ohio Cultivator*, recently taught me what, till then, I did not know, viz. "That calves, while fed on milk, need free access to water; I had supposed the milk (consisting of their entire food) was enough without water. But in changing my calves from one pasture to another, they passed a water trough and drank heartily. I acted on the hint, and have since supplied them, and find they need water as often as older cattle. No day passed without their using more or less."

BLACK ANTS.—A correspondent asks the following question: "Will you please ask your numerous readers what remedy I can adopt to destroy 'black ants?'" As one of the numerous readers of your paper, allow me to answer the lady friend:

Take about a teaspoonful of common red lead, which can be obtained at the painter's, and mix it with a sufficient quantity of molasses to make a thin paste. This will catch a part, and disperse the balance of the trespassers.—*Journal.*

SPIRIT OF THE AGRICULTURAL PRESS.

RABBITS.—In some localities, particularly at the West, rabbits are quite destructive of young fruit trees. Mr. John Hand, of the "Madison Nursery," says, in a communication to the *Wisconsin Farmer*, that sulphur mixed with any kind of oil and put on a bit of lath inserted in the ground, near each tree, and re-touched in January with a paint brush dipped in the sulphur composition, will keep them away, unless they are of a different species from any he is acquainted with.

FISH OIL AND FRESH MANURE.—A correspondent of the *Valley Farmer* says that having read that fish oil rubbed on the limbs of trees would keep off the curculio, he besmeared several plums and apricots with it. The depredations of the curculio were not prevented at all, but his trees were killed. The bark turned yellow where the oil was applied, and the leaves wilted. He also cautions tree-growers against the use of green manure. A neighbor of his, a doctor, set out a choice collection of pear trees. The doctress, being a great lover of fine fruit, and wishing to hasten the production of their pet trees, had a small coat of fresh manure put about them, and nicely turned under, in the doctor's absence. One after another of the trees died; and when the cause was ascertained, a terrible storm disturbed the peace of the worthy doctor's family.

DUTY OF OVERSEERS.—We notice in one of our Southern exchanges, an article on this subject by a correspondent who is himself an "Overseer," and very possibly a Northern man with Southern principles. In reply to another correspondent, who had said that he believed that overseers might encourage negroes to work, and dispense with the lash, this writer remarks:—"My experience has not learned me this; they must stand in fear of the lash; 'an ounce of fear is better than a pound of love,' with them." After enumerating the various articles that should be furnished by the planter, he says:—"I mention these things, because there are a great many men who give their negroes not more than half enough to eat, give them old tools to work with, and then blame the overseer if he does not make as much as a neighbor who furnishes every thing necessary."

For the New England Farmer.

HAY CAPS.

FRIEND BROWN:—I propose in a few words to tell the readers of the *Farmer* how they can have good hay caps, costing them nothing but a few common brass pins, and a little time preparing sticks to fasten them on with. First, I start with the fact that every farmer uses more or less cotton cloth, during the year. Well, then, buy a web or half a web of such cloth as you need in the family. Tear off pieces, some a yard, some a yard and a quarter, and some a yard and a half long. Turn the corners up sufficiently to form a loop, and fasten them with a common, large, brass pin. For pegs, you can break small smooth limbs from any tree that is handy, and sharpen them at one end. You are then "armed and equipped" for a rain. Take good care that your caps are dried after using, and when you are done with them, the "gude wife" will find a use for them, and will call them none the worse for being used in the field.

I am inclined, while I have my pen in my hand, to report the prospect of crops. Grass is excellent; corn is backward; hot weather may bring it forward, so that we may get a fair crop; grain is low; potatoes look well; Chinese sugar cane is decidedly below every thing else, not only in size, but in the estimation of farmers. I have seen many little patches, but it all looks like being "small potatoes."

Apples are being mostly destroyed by the curculio. What do ripen, will probably be small and full of "knots."

GRANITE QUILL.

Weare, N. H., 1857.

CABBAGE WORMS.—J. Farrar, one of the most practical farmers in the State of New York, says that cabbage worms may be destroyed in the following easy and simple way. "Break off a large leaf from the bottom of the cabbage, and place it on the top, upper side down. Do this in the evening, and in the morning you will find nearly all or quite all the worms on each cabbage have taken up their quarters on this leaf. Take off the leaf and kill them or feed them to chickens, and place the leaf back, if there be any more to catch."

For the New England Farmer.

HOW TO DESTROY WEEDS.

MR. BROWN:—As now is the time for destroying noxious weeds, I will give you some of my experience in this department of farming. I was brought up in the old-fashioned way, of hoeing corn three times and potatoes twice; nothing more was done, if the weeds spoiled the crop. After I took the management of the farm, I began to manure more liberally, and found that the weeds increased in equal proportion upon me. It was double labor to dig the potatoes, and the corn was overrun and buried in weeds.

I came to the conclusion that I must do something more, or it was useless to pretend to cultivate. I then thought I would try the experiment of hoeing the land all over about the first of August, before commencing to cut *salt hay*, and have practised it every year since. I feel satisfied that I have obtained extra produce enough to doubly pay the labor, and the improvement of the land is almost incalculable. I can now raise grain and not have it choked with weeds. If I wish to raise a root crop, I can select the most suitable place without the fear of its being overrun with weeds, so that it will cost more to keep them clear than the whole crop would be worth. I think that a great saving of labor is made by not allowing any weeds to go to seed, beside the neat and tidy appearance it gives the farm, which I think to be a great deal, for I wish to make farming so attractive that more of our young men who have an inclination for farming, shall try to get hold of a little land, here at home, and cultivate it *well*, and not desire to be great land-holders; for but few amongst us are capable of managing a great farm to advantage. While most of us may improve a small one, and have the pleasure, in our declining years, of looking back and seeing that we have done something for the benefit of the race, by making the land produce double the amount for human sustenance that it did when we came into possession of it.

Gloucester, July 3, 1857. THOMAS HASKELL.

SUMMER CARE OF TREES.

The general policy in the management of a young and growing tree is to throw its whole vital, wood-making power into those branches, and those alone, which are needed, and are to be preserved; that is, so to manage the tree that half its growth, every two or three years, shall not be thrown away in pruning. Examine the branches. See first what are necessary to make the tree symmetrical. Then pinch off every other sprout. If one starts from the bottom, pinch it off at once. If a branch is pushing out too rapidly for the rest, and threatens them, pinch off the end and stop it. In this way, all the sap is appropriated just where it is wanted, and the tree does not have to be shocked every year by the wounds of the pruning-knife. All young trees should be mulched. It is time to do this now. Let not their roots get the blighting impressions of the hot sun at all. The mulching can be done in numerous ways. If the tree needs enriching, put a good coat of coarse manure around it. The cheapest mulch, and one that answers well, though it does not look very well, is the grass mowed about this time in the yard. Put

on enough of it so that it will not dry up but form a mass and rot. Do not try to grow too much wood. If the trees are set out this spring, remember that their roots have not got firm hold of the earth yet, and that their ability to feed the branches is limited. Therefore, cut down to meet the ability of the roots, in their new location. With intelligent care, you can save all your trees, and soon put them beyond harm's way. By all means do not be afraid of manure, in almost any form.

PHILOSOPHY IN COURT.

The New York *Post* relates the following of Uriah A. Boyden, a civil engineer of Boston, who recently offered $500 in two prizes to the students of Harvard College who attained the greatest skill in mathematics, which prizes are to be awarded this week:

This gentleman was concerned in a suit last year, brought by him in the Supreme Court of Massachusetts, against the Atlantic Cotton Mills, of Lawrence, which was of a very interesting character, but has never, so far as we are aware, come before the public. Mr. Boyden had agreed to make a turbine water-wheel for the Atlantic Mills, which should save or "utilize," as it is termed, seventy-six per cent. of the water-power; if he succeeded in saving that per centage, he was to have $2000, if not, he was to have nothing; and for every one per cent. above that, he was to receive $350. Mr. Boyden went to work and produced a wheel which saved, as he affirmed, *ninety-six* per cent. The labor involved in this result may be imagined, from the fact that Mr. Boyden spent more than $5000 in the mere mathematical calculations. The company had provided no sufficient means of testing the question practically, and as the per centage claimed by Mr. Boyden was altogether unprecedented, they contested the claim.

The case went into court. No jury on the globe could comprehend the question, and the learned bench found itself entirely at fault. The case was accordingly referred to three well chosen parties: Judge Joel Parker, of Cambridge, Professor Benjamin Pierce, the mathematician, and James B. Francis, of Lowell, the agent of the united companies of Lowell, in the management of the common water power. Professor Parker furnished the law, Mr. Francis, the practical acquaintance with hydraulics, and Professor Pierce the mathematical knowledge. That learned geometer had to dive deep and study long before the problem was settled. But settled it was, at last, and in Mr. Boyden's favor, to whom the referees awarded the sum of eighteen thousand seven hundred dollars. Mr. Boyden had previously constructed turbine wheels that utilized respectively the extraordinary amounts of eighty-nine and ninety per cent.; the last wheel utilizing ninety-six per cent., exceeds anything of the kind that was ever made. The wheel is one hundred and four and three-quarter inches in diameter.

GREAT WOOL GROWER.—The Manchester *Mirror* says that Mr. Abraham Melvin, of Weare, N. B., recently, sold 25,000 pounds of Spanish Merino wool to parties in Boston for 60 cents a pound, amounting to $15,000. The wool was his own raising, and part of a three years' stock.

For the New England Farmer.

UPLAND CULTURE OF CRANBERRIES.

DEAR SIR:—As it always makes me feel in an obliging mood to be kindly spoken of, especially by one so chary of flattery as yourself, I will endeavor to tell your Rutland correspondent what I have seen of the upland culture of the cranberry, in the town of South Danvers, where I have my home. Mr. Needham has a field containing three-quarters of an acre, divided into beds or patches, so that he can conveniently pass among them. When I last saw them, the vines were completely matted together, covering the ground. The last season there grew on this bed more than one hundred bushels, which sold readily for four dollars a bushel. For several years, I have used in my family fruit from this bed, and consider them worth at least fifty per cent. more than the best of cranberries, gathered on our open wet meadows. Mr. N. obtained his plants from the neighboring peat meadows, and set them out as you would strawberries, and found no difficulty in rooting the plants. They need no fertilizer, nothing but water; the cranberry is a dear lover of cold water, and grows best with no weeds or grasses near it. It is ambitious of a complete monopoly of the ground, and will obtain it in the course of three years. Mr. N. spread pulverized mud from the meadow among his vines, for the double purpose of keeping down grasses and weeds, and for absorbing and retaining moisture like a sponge. Mr. N. looks carefully to whatever he undertakes to take care of, and consequently suffered no worms or other interlopers to be among his beds, and found his account in being vigilant.

June 27, 1857. ESSEX.

For the New England Farmer.

ABOUT MAPLE SUGAR.

I made from 27 large maple trees that stood in open land, the present season, 328 pounds of sugar; it took about 8 quarts of sap to a pound of sugar.

The inquiry is made in the *New England Farmer*, how to make sugar with less than 2½ cords of wood to the 100 pounds of sugar. I will tell you my mode of procedure. First, I have a stove 3½ feet long, 2¼ wide. I have a pan 8 inches deep, and just big enough to fill the top of the stove. It will be necessary to have but one door in one end, and a flue hole in the other, for a pipe, which must run out some 3 feet from the stove, and then turn up with an elbow, some 8 feet, to give a draft; by so doing it will take about half a cord of dry wood to make 100 pounds of sugar. You can boil in about 40 or 50 pailsful of sap in 10 hours, and it is but little trouble to tend it, for it will not run over when it boils fast, for it boils all over the bottom.

Pittsford, Vt., 1857. JOSIAH LEONARD.

MANUFACTURE OF PEPPERMINT.—The Lyons (Wayne Co.) *Republican* states that H. G. Hotchkiss, of that village, is the greatest producer of peppermint in the world. He has from 200 to 300 acres under cultivation, one hundred and fifty acres of which can be overflowed with water to the depth of six or ten inches, at pleasure. This process enables him to continue to grow the crop upon the same soil for a series of years, and protect the young shoots in winter, by a watery covering. Between

April and July, he employs more than one hundred laborers upon his plantation. Mr. H. sells the oil of peppermint in London and other places, and his annual trade amounts to from $75,000 to $125,000. The *Republican* says that the Western crop has been cut off by the severe winter, and the value of Mr. H.'s extract, which is said always to command an extra price, is expected to advance in the market. Michigan yields the next great product of peppermint, if, indeed, it is behind our Wayne county manufacturer.

For the New England Farmer.

CHEESE-MAKING IN VERMONT.

Mr. Brown:—An inquiry was made in a late number of the *Farmer* about cheese-making. Although I do not feel worthy of writing for the public to read, I will give my method of cheese-making, which I learned of an old dairy woman, who said she learned of a girl whose parents sent her to the Shakers, with whom she served time for that express purpose.

The milk should be as warm as it conveniently can be had from the cows; if the rennet is good, the milk will curdle hard enough to cut in thirty minutes; it should then be carefully cut with a curd-knife made for the purpose. After the whey is dipped off, which is done by putting a strainer over the tub, the curd should again be broken with careful handling, as too much squeezing works away the richest part of the curd, which will be readily seen by the whey being white. The whey first dipped off is put into a kettle or boiler for the purpose of scalding; it should be scalding hot, but not boil; while the whey is heating, the curd is dipped off into a strainer placed over a sink or basket made for the purpose, then is tied up and a weight placed upon it for a few moments, after which it is crossed up two or three times, each time the weight being applied; the curd is then sliced about three-fourths of an inch thick, and placed as loose as may be into a tub. So it may scald evenly, care should be taken to stir it with a paddle for the purpose as soon as the whey is poured upon it. When the curd feels a little tough, or will squeak between the teeth, it is sufficiently scalded; it is then dipped into the strainer which is over the basket, after which it is spread on tables or boards to be cooled as cool as it can be; then it is hung up in a strainer to drain about one hour; then is cut by a curd-cutter and salted, three ounces to five pounds curd.

As to presses, they differ so much in power it is difficult to say anything of them. The cheese, however, should be pressed hard, and the whole power should not be put on at first; it should be pressed two days, and be turned three or four times, from a tunnel strainer first to a cotton one. When the cheese comes from the press it should be bandaged by a bandage cut crosswise of the cloth, with a string drawn into each edge of it wide enough to bring the bandage about three-fourths of an inch over the top of the cheese before the side bandage is put on; cut a piece the size of the top and bottom of the cheese, wring it out in the grease, and put it smoothly on, after which the side bandage, with the ends sewed together, is drawn over, and strings drawn, which makes the cheese perfectly safe from the fly. The bandages are made of the cheapest of cotton cloth. The best and cheapest grease is made of the cream or scum of whey, by the whey being set twenty-four or thirty-six hours, churned and simmered slowly to an oil. If double curded cheese is required, the curd should be prepared for the hoop, then hung in the cellar, which is added to the next day's after that is prepared. A. E. F.

Reading, Vt., June 28, 1857.

A FINE FLOCK OF SHEEP.

Friend Brown:—Having noticed in a communication from F. L. Hart, of West Cornwall, Ct., that he says he shall raise from twenty-six ewes, thirty-two lambs, I was induced to count mine, and find that I have ninety-eight lambs (all weaned but five) and sixty ewes. I lost, after the lambing season commenced, two ewes and one lamb, and gave away six lambs; this makes one hundred and five lambs dropped by sixty-two ewes. Farmers sometimes speak of good and bad luck in raising lambs; I almost always have good luck if I manage well. Ewes that drop twins, should be taken out of the flock at first, and kept with the lambs in a dry warm place, until the lambs are strong enough to follow the sheep readily. In weight, the South Downs are not expected to equal the long wooled sheep, but after selling four of my bucks to go South last autumn, I sold one to a farmer in this vicinity, and delivered it in Newport, when I asked him to guess at the weight of his lamb; he took it up, looked very wise, and I think he said eighty pounds and *a half*; we then tied his legs, and he weighed one hundred and nine pounds. I have sold fourteen of my sheep to go into Connecticut in a week or two, and if they are well cared for, friend Hart must look well to his laurels. T. B. Buffum.

Near Newport, 7 mo. 2, 1857.

For the New England Farmer.

THE HONEY BEE.

Mr. Editor:—Will you or some of your correspondents, please to inform me through the *Farmer*, if there is any way to prevent a weak swarm of bees from being robbed by foreign bees, after it is known that they are attacked. Five years ago, my last swarm died. I left the hive on the stand half full of comb; last June there came a large swarm of bees and took possession of the hive and filled it full of honey. This spring, on examining the hive I found more than a quart of dead bees, which reduced them to a feeble swarm; they worked as soon as the flowers appeared till some of the last days of May, and were then attacked by other bees, and in a few days the hive was entirely deserted; at night, and in the middle of the day, there was a large collection of bees about the hive. On examining the hive I found it about two-thirds full of honey. John King.

Barre, June, 1857.

Thinning Plants.—Cobbet said, in speaking of the culture of cucumbers, that two plants in a hill would bear a smaller crop than one, three less than two, four less than three, until fifty plants would bear nothing at all! The remark will apply to all cucurbitous plants, as melons, squashes, and pumpkins—which are often allowed to grow too thickly.

For the New England Farmer.

LETTER FROM MR. FRENCH.

Paris, June 24, 1857.

MY DEAR BROWN:—To record all the strange sights that meet my eye in my wanderings, would require the whole weekly sheet of the *Farmer*, and I must content myself, therefore, with giving an occasional hasty sketch.

I have been in France about one week. I was advised in London to hasten on my way hither, because it was said the weather would be so hot in Paris that I could not endure it. A New England education, however, affords wonderful preparation for endurance of the vicissitudes of climate. The English in London, during the three weeks I was there, were grumbling constantly about the sudden changes. One day it would be intolerably hot, and another, so chilly that their teeth almost chattered. While, to my constitution, there seemed no change worth noticing. I think, during the whole time, the thermometer was not above 75°, nor below 55°. I did not wear an overcoat after I stopped in London, nor did I put on a thin garment, or change my winter dress; and suffered neither from cold nor heat. In France it has been warmer, but the thermometer had not yet risen to 80° at midday, and at night it is perfectly comfortable to sit, with all the population of the city, in the open air, with no covering to the head.

One who has seen the glass, in a cool, shady place at home, indicate 102° at one time, and in the same spot a few months later, at 36° below zero, as I have observed the thermometer at my own door at Exeter, within a year past, is prepared for almost any emergency in the way of weather, that he will be likely to meet. A glance at the people here, would show at once, that they have no expectation of any violent changes of temperature. More than half the women go about the streets and public squares, without either a hat, or bonnet, or parasol. Many of them wear a sort of night-cap, the worst looking garment known to France. All the common people—females I mean, such as I saw at work in the fields on my way here from Havre—wear them, and probably it is only the same order here, who submit to so ungraceful a head-dress.

Generally, everything is gracefully done in France, but there are exceptions. One does not like to make invidious comparisons, but coming from England, the difference in the manners of the people, to a stranger, is very striking.

There is nothing, perhaps, that makes one feel more like a man that is lost, or rather, that has just been *found*, than to stand suddenly on the wharf, as I did at Havre, for the first time in his life, in a crowd of people, all of whom speak a foreign tongue. I read French tolerably well, and speak it, after a fashion, but as to comprehending the least idea which the various men, women and children about me were so busy in communicating, it was out of the question.

I had the custom house to go through, and my own way to make, for the only person I had found who spoke English, on board the boat, was absorbed in the crowd in a moment. I was, of course, prepared for the scene, and amused myself by replying to the various porters and cab-drivers who beset me, in good strong English, looking them in the face as if I was utterly ashamed of them for not understanding such an easy language. I have tried it a good many times, and I believe they feel ashamed of themselves. It is a method of carrying the war into the enemies' country, which I would recommend to my countrymen who travel abroad without the requisite knowledge of foreign tongues. A slight knowledge of the French enables one to make his wants understood. You have time to compose your own questions, and the French are so quick of apprehension, and so polite, that you manage common affairs very easily; while my countrymen who speak French very well, can understand about as much of what two Frenchmen are saying to each other, as they would of the chattering of two blackbirds. I, however, find English and Americans everywhere, and they are, usually, in this foreign land, civil and inclined to associate.

The land from Havre to Paris, about 170 miles, is the poorest I have seen since I landed in Europe, though it is highly cultivated, and has none of the wild appearance of our railroad routes in America. The banks and sides of the cuttings of all the railways, both in France and England, are carefully graded and cultivated. In England I saw fine crops of clover and of vetches mowed for fodder on these slopes. Near the stations, these banks, and the little spaces about the station-houses, are laid out into flower beds. The railways are usually fenced with living hedges; so that a European railway presents a very different appearance from what we are accustomed to see. Flowers, indeed, are seen everywhere in France. The attendant who showed us the door at the station in Havre, had a large bouquet in his hand. The tables and shop windows, the stairways and porticoes at the hotels in Paris, are all ornamented with flowers.

Along the route from Havre, we saw grapes growing in the fields. The land, though not divided by fences, appears to be occupied in small parcels, of an acre or less, for much of the way. The grapes are tied to single stakes, and allowed to run only to the height of three or four feet. Light wines seem to afford the common beverage of that portion of the people who eat at the hotels and restaurants.

At breakfast, the first question is, "What wine will you have?" not will you have wine? At din-

ner, I see no person without his bottle of wine; usually of some kind not stronger than good cider. The lady who takes her lunch alone, drinks her half-bottle of claret or Chablis; and I must say, it seems to my mind a far more ladylike drink than the ever present beer and porter which I saw everywhere in England. I approve of conforming to the habits of the Romans, generally, at Rome; but as to taking a bottle of porter with my dinner, I could not do it, even at the risk of outraging the institutions of the country by the omission.

A small glass of brandy added to the after-dinner cup of coffee, is the almost universal custom at the public places here, in Paris, but on trial, I find that my Puritanical taste revolts at the mixture. Everybody is in the streets in Paris in the evening, and if there were any intemperance one might probably discover it, but I have been assured by those who have been long lookers-on here, that it is very rare to see any person under the influence of spirituous liquors.

I do not believe there is in the world a parallel for the brutish habits of drinking which prevail with us. An American walks up to the bar, and pours a glass of brandy down his throat as if it were an emetic, or a dose of hemlock to which he had been sentenced. A Frenchman orders his wine, his newspaper, his bread and butter, and strawberries, and sits an hour at his breakfast, taking rational, solid comfort. Even John Bull takes time to dispose of his bottle of porter and his mutton-chop, grumbling, of course, about the weather or the cooking, for John cannot help grumbling always about something, though you may readily see that it does not wear off his flesh. Neal Dow is trying the temperance experiment in England. How he will succeed is uncertain. Everybody drinks beer there, from the youngest to the oldest. I have sat and watched the women and children drink at the ale-houses, and to me it seems that a reform must be productive of great good there. The poor laborer, who gets but two dollars and a half a week for his labor, and boards himself, can ill afford his daily quart of beer, but he always has it, at some rate or other. Even the chambermaid, in her contract of service, stipulates for her pint of beer per day, and generally drinks a quart. This matter of beer-drinking is an important item, when we come to compare the prices of labor in England and the United States, for no inconsiderable share of an English laborer's wages goes for beer, in one way or another. I believe that I have already alluded in a former letter to the great disparity of the wages of field labor in the two countries. I shall be able to give an accurate statement on that point, in a future communication.

I was present a few days since at the trial of a sort of steam plow, or digging machine, the invention of a Frenchman, which it seems to me may prove of some value, when perfected, to American agriculture. The engine is a locomotive of three-horse power, it was said, though it seemed to me much greater. It was mounted on four broad wheels, and the digging apparatus was attached to it, digging behind the engine, which slowly moved along like a railway engine. The diggers were in pairs—I think some eight pairs—attached to several crooked axles, and not made fast to one cylinder, like the American machine of which I have read. Each pair of diggers struck into the ground in succession, to the depth of eight or ten inches, forking it up very light and even. It was at work when I saw it on a piece of land that had been repeatedly dug over by it, land for agriculture being rather scarce here in Paris, where it was exhibited. I think the great difficulty in working machines for such purposes, has heretofore been, that they clogged badly. I should think this might be free from this objection.

The inventor, who was present, had no knowledge of English, and my knowledge of French was not sufficient to enable me to converse upon a subject so technical as this. I shall endeavor to procure a description and drawing of the machine as soon as it is published. No patent has yet been granted upon it, and probably no accurate description can yet be obtained. It occurred to me that if the engine was really only of three-horse power, we might work a similar machine anywhere in New England with oxen. This machine dug a breadth of about four and a half feet at once, leaving the land in the condition of soil well dug over with a fork. The engine turned at the end, but took rather a wide sweep, so that it would hardly do for back furrowing.

Since writing the foregoing, I have spent half a day in going from place to place, for some drawing or description of the digging machine I have mentioned, but as no patent has been granted, it is impossible at present to get any further particulars than I have furnished from a hasty inspection. The Americans are far ahead of any other country yet in the perfection of their farming utensils, especially their small tools. Everywhere in France I see the women spreading hay with a wooden fork, and the rakes they use are as heavy as four of ours. They have, by the way, a strange fashion of tying their hay all in bundles of about twelve pounds, in the field. All the hay is thus parcelled.

At a meeting of the Royal Agricultural Society in London, last week, a paper was read on horse-powers, and it was stated that the power was entirely practicable, and had been used in America. It was introduced as an American invention, but as one not much known in England. I saw at once that it was the common horse-power, in use at our railway stations, in which the horse walks on an endless platform; and being called on by the presiding

officer, I had the pleasure of informing the gentlemen present, that this machine, so new to them, was almost as common in America as carts and plows. Their plows in use in England are quite different from ours, nearly twice as long, and much heavier. Their plowing is perfect, as straight as a line, and of uniform depth, such plowing as we cannot do in the United States. Whether the difference is in the plow or plowman, or in the land, I am not certain yet, but I think much is due to the skill of the plowman, who all his life holds the plow and does no other work. But I have inadvertently stepped over to England, when I ought to be writing of France.

Hoping to see you and my native land before the leaves fall, I remain, yours truly,

H. F. FRENCH.

For the New England Farmer.

SWALLOWS.

BY S. P. FOWLER.

I have seen of late, in several communications of your correspondents, passages relating to the sudden death of barn and chimney swallows, with the inquiry, what was the probable cause of their destruction. I have been induced to communicate to the readers of the *Farmer* my thoughts upon the subject of the inquiry; the more readily, as I think we shall discover, when we come to examine the habits of these birds, that they are remarkable for becoming, under some circumstances, torpid; thus rendering the belief in their brumal retreat the less difficult to some of my ornithological friends. Every close observer of the swallow tribe, cannot fail to observe how susceptible they are to cold, and its tendency in producing torpidity.

I have caught the white bellied swallow, after a cold frosty morning in spring, completely benumbed by cold, with its pulsations as low and as torpid as a dormouse. In cold rain storms in spring, for days together, the chimney swallows will doze and sleep in chimneys, in a torpid state, and when they can be viewed from below, they will be seen with their claws clinging to the sides of the flue, their bodies braced, with their tails presenting a most singular appearance, when thus tilted back against the wall, fast asleep, awaiting the clearing up of the storm. And we may here observe that collected as they often are in considerable numbers in chimneys, they are frequently destroyed by a fire being kindled in the stove or furnace below them. The causes, inducing sleep in the swallows, are at work producing a chilly sensation in the inmates of the house, causing them to light their fires.

The present season has been remarkable for its coolness and frequent rains. Such seasons, I have always noticed, are peculiarly destructive to the swallow tribe. Martins, within my recollection, have suffered most severely from cold, backward springs. They suffer, likewise, from want of food —it being insects—which most abound, and are found abroad only in warm seasons, and bright days. The same may be said of the barn swallow, to a less extent, and it may be the principal cause of their death this season.

One of the reasons given for disbelieving in the brumal retreat of the swallow is, that they have been dissected, and nothing discovered different from other birds, as to the organs of respiration. But we have seen that they are differently constituted from most birds, inasmuch as cold produces torpidity and sleep. This state renders them insensible to a desire for insect food, when it cannot be obtained, for the insectiverous tribes themselves are as quiet as the swallow family, and are, like them, waiting for mild and pleasant weather to be abroad in the fields. The distinguished and venerable traveller and naturalist, Humboldt, when in his eightieth year, says the circumstance of the sand martin sometimes burying itself in a morass, is a phenomenon, which seems not to admit of a doubt. And he continues, the winter sleep of the swallow in question, (the *Hirundo riparia*,) is not supposed to belong to the entire species, but only to have been observed in some individuals.

It should be borne in mind, that no believer in the brumal retreat (at least in the present day,) supposes that all of them pass the winter in sleep. But on the contrary, they believe that they migrate for the most part in autumn, like other birds. May not those swallows, that have been discovered in a torpid state be the weak birds of late broods, that are incapable of migrating, and being overtaken by the frosts of autumn, seek a shelter from the cold, and pass into that state of insensibility, to which we see they are so prone? We sometimes notice in some insects, a want of vigor, which renders them incapable of leaving the nest, with the rest of the swarm, for the purpose of completing their transformation, and are content with performing it where they are, as best they may. Thus it is that nature provides for the necessities of her weak offspring.

It is common for some persons to enumerate our three distinguished ornithologists in the list of unbelievers in the torpidity of swallows. Mr. Wilson, we all know, treated the subject always with ridicule, and so did his patron, William Bertram, before him. Mr. Nuttall had his doubts of the truth of our belief, judging from what he says in his manual. Mr. Audubon, who must be considered our greatest ornithologist, certainly, at one period of his life, when I was personally acquainted with him, had not made up his mind upon the subject, and wished to obtain more light before expressing an opinion. This was in 1832, but what may have been his belief upon this vexed question before his death, I do not know. He no where, to my knowledge, in his writings, expressed a decided unbelief in the brumal retreat of the swallow. Our unbelieving friends, I am persuaded, will not exhibit so much torpidity as to bring forward an array of names of persons, distinguished as travellers and naturalists, as our opponents, and thus vainly attempt to submerge us in mud and water, with the poor swallows. We could beat them at that game, and produce two names to their one of all those who have expressed an opinion upon the subject.

A great deal is sometimes said by some persons, about the improbability of swallows, under any circumstances, or in any situation, passing the winter in a torpid state. But natural history, as well as civil history, is to be credited, not always upon the degree of *probability* which *seems* to be attached to its teachings, but upon *facts*, founded upon the testimony of witnesses of noted veracity. And there is no fact more credibly established in natu-

ral history, than the torpidity and winter retreat of swallows. Although the direct proof is not so often seen and discovered as the more indirect.

Danvers Port, June, 1857. S. P. F.

For the New England Farmer.

LITTLE THINGS:

Or, A Walk in my Garden....No. 12.

Every affectionate father loves his own children better than all other children in the world; so do I love my garden, however humble in comparison with the best of my neighbors. But here comes grandmother, who told me how to have an abundance of

EARLY SALAD.

Take the small sized onions which you have wintered over, and plant them as early as you please. As soon as the tops are up a few inches, cut them down nearly to the bulb for salad. In a few days you may have a second crop. The onion will new bottom, and may be used in a short time for the same purpose. A bed of cives makes a very early salad. Cut up these or onions with a little tender new cabbage, and there is a dish early in the season for everybody. But here I must stop to say a word about

THE ONION MAGGOT.

My onion bed is attacked by them, and I have just commenced two experiments to stop their ravages. From some of the rows, I draw away all the earth from the bulbs, and let the onion lie on the ground. The fly chooses to deposit the egg a little under ground, and the hot sun will kill the worm, if already deposited. I once saved a fine bed in this way, but it was very dry and warm weather. How it will succeed in a wet season, time must determine. The other method is to draw the earth high up around the tops until their ravages are over, when it can be removed. But here comes some one I dread to see about as bad as the onion maggot. It is

A VISITOR,

who had read something of my *Little Things*, and somehow, got the impression that I had a splendid garden. I have no such thing. I am a learner. Almost every day, I learn something new in the garden, and though it be a little thing, I cannot help speaking of it, hoping that somebody else will be benefited thereby. But I have been at work to-day, digging up

MY ASPARAGUS BED.

I was surprised to find that the roots did not descend more than a foot; whereas, when I made it, I dug it nearly four feet deep, and filled it with manure and soil. Now what is the use of this depth? Is not two feet just as good as four? To obtain a new bed, is it better to transplant old or young plants? But I learned one thing from my visitor, for which I thank him. Speaking of

RHUBARB,

he says that he finds wood ashes the best manure for it. The oxalate of potash, so abundant in this plant, would indicate that he was right. But let us look at my

PLUM TREES,

which have been ravaged by the curculio worse than before. There is one fact I have not seen noticed by others, that where trees are in a vigorously growing condition, many of the plums will continue to grow in spite of the puncture, while old trees will lose them all. Will not this in part account for the contradictory reports in regard to the success of different experimenters? But I must go back to my

ONION BED.

I have completely succeeded in stopping the ravages of the maggot. The tops grow somewhat crooked, but the bulbs fill out apparently as well as when erect. I present this as a sovereign remedy, till some one shall prove it unsuccessful. This reminds me of a neighbor who has great faith in the use of

SALT FOR KILLING INSECTS.

He put into a small bed a bushel and a half of salt last fall, hoping to kill the onion maggot; but they have almost entirely swept his bed. It was only yesterday that I read an article, advising the putting of a bushel and a half of salt to the acre to kill insects. Now I would like to know how small a dose, whether infinitesimal or not, is necessary to kill an insect. The same is true in regard to weeds. A wrong impression prevails in regard to the use of salt for these purposes. It must be used in immense quantities to effect the object. Littleish enough, I remain, N. T. T.

Bethel, July, 1857.

The Spider and the Toad—A Curious Incident.—The following singular relation is furnished by a correspondent of the *Traveller*, as having been witnessed by a person now living, though occurring more than forty years ago, about sixteen miles from this city:—

The narrator said, that while walking in the field he saw a large black field spider, considered of the most venomous species, contending with a common-sized toad. The spider being very quick in its movements, would get upon the back of the toad and bite it, when the toad, with its fore paw, would drive off the spider. It would then hop to a plantain, which was growing near by, and bite it, and then return to the spider. After seeing this repeated several times, and noticing that each time the toad was bitten it went to the plantain, the spectator thought he would pull up the plantain and watch the result. He did so. Being again bitten, and the plantain not to be found, the toad soon began to swell, and show other indications of being poisoned, and died in a short time. If the plantain, which grows so abundantly near almost every dwelling in this vicinity, was such an immediate and effectual remedy to the toad for the bite of the spider, can we not reasonably infer that it would be an effectual cure for man for the bite of the same insect?

Removing and Preventing Rust.—Some persons employ an acid to remove rust from knives; this should never be done under any circumstances. Nothing surpasses rotten stone and oil for scouring knives and forks. To prevent stoves and grates from rusting during summer if placed in damp situations, give them a thin coat of lard and resin melted together, in the proportion of three parts of the former to one of the latter.—*Scientific American.*

A RUSTIC VILLA.

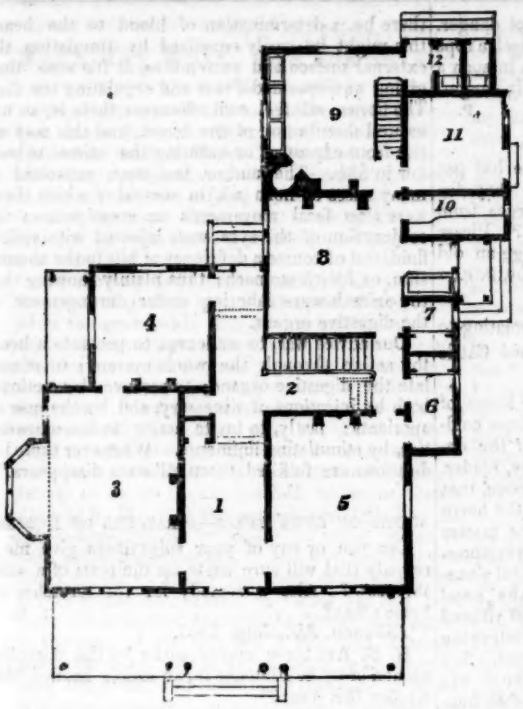
We present this week another of those beautiful designs from WHEELER's "*Homes for the People*," a work of which we cannot speak in terms of too high commendation. We shall let the author speak for himself in describing the advantages of the plan presented, but in view of the wants of our New England people, in the matter of pleasant and attractive homes, we cannot refrain from making a few remarks before we introduce Mr. WHEELER to his audience. It is the custom too often among us, for those who intend building, to sit down and make their own plans, thinking they know more about their wants than any one else can be made to understand. Without any knowledge of the rules of architecture or the fitness of things, a plan is made and submitted to a builder, who finds the less objection he makes the more his own interest is promoted, and so a structure is erected with the whole external and internal arrangements of which, the owner is dissatisfied. We know that plans furnished by regular architects are often expensive, at the commencement, and may therefore be objectionable. But, thanks to some of the more liberal ones of the profession, we have now many books on the subject of building, and any one can, for a few dollars invested in their purchase, and a short time spent in their perusal, avail himself of the most valuable suggestions by the most experienced designers. We earnestly recommend to all who intend to build, if only the simplest structure, a study of the rules and plans given in such books as those of Mr. WHEELER, Messrs. CLEAVELAND & BACKUS, VAUX, and others, and can assure them that the knowledge gained will amply repay the necessary cost.

The plans presented are thus described:

In front is a long and wide veranda, in the centre of which the roof shoots out to shelter the carriage that may be standing before the entrance door. The hall within is nine feet wide and fourteen long, No. 1, and opens at one end into a large closet, and then, by means of an arch, leads into a staircase hall, No. 2, which turns off at right angles and then is continued, but of narrower width, to the rear of the house. The staircase hall is eight feet in width, and has in its further end a door leading to the kitchen and offices.

The drawing-room, No. 3, is on one side of the entrance hall, and has at one end a wide window which opens upon the veranda, and on its side a bay-window from which a lovely view is obtained. The size of this room, exclusive of the bay, is twenty-three by fifteen.

Communicating with the drawing-room, but recessed from it, so as to form a veranda to its win-



PLAN OF PRINCIPAL FLOOR.

dow, is a small library, No. 4, which is thirteen feet square, containing a fire-place and a recess for a book-case upon its side.

Upon the other side of the hall is a dining-room, No. 5, which is twenty feet by fifteen, having attached to it a large china pantry, No. 6, with an inner closet, and a sash opening into the staircase hall, so that dishes, &c., may be conveniently passed from the kitchen. In the projection containing this pantry is a store-closet, No. 7, communicating with the kitchen, No. 8, which is fifteen feet square in the clear.

By the side of the kitchen, and under the same roof which contains the store and china-closets, is an entry, with ample room for a sink, and opening into the garden by means of a covered porch.

In the rear of the kitchen is the laundry, of the same size, in which are an oven and wash-trays, as also the private staircase to the floor above.

The accommodation on the chamber floor is ample for the probable wants of the family; and, in addition to the rooms on this floor, is space in the roof of the front gable for three good chambers, if so large an increase be needful.

The arrangement of ground and chamber floors shows a liberal supply of all that can conduce to comfort and convenience in living; and as the cellar, seven feet in the clear, extends under the whole building, furnace, store-rooms, root cellar, coals, &c., find ample accommodation therein.

The cost of this building by a contract made for its erection, at Orange, New Jersey, is four thousand seven hundred dollars, and the execution of the work is in the best and most substantial manner. This amount will serve as a guide to estimate the cost of such a villa in other States; and as one comprising very many conveniences at small cost, this building is offered as a fair example of a rustic villa.

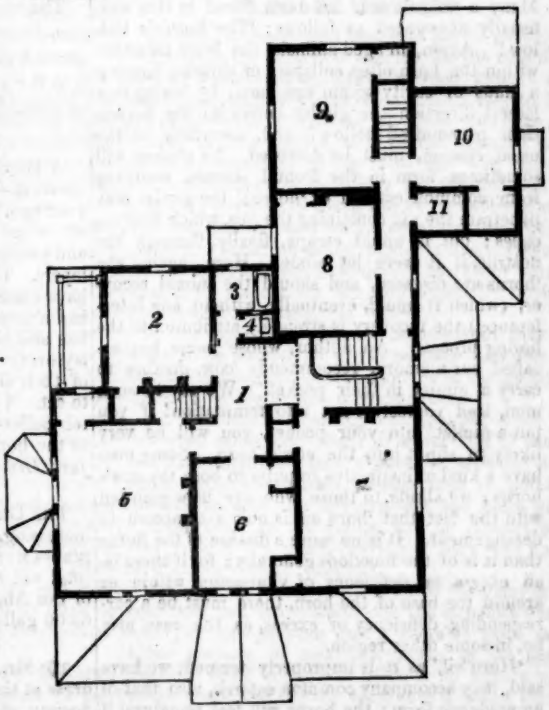
We cannot copy the full description and explanation of this plan given by Mr. WHEELER, but refer the reader to the work from which we have copied the above.

EXTRACTS AND REPLIES.

TO PREVENT DROWNING.

When young men go into the river or pond to bathe and swim, they should always carry with them a long and strong rope, so that, should one of their number become fatigued and be unable to swim ashore, they might rescue him from his danger by casting him an end of the rope and then drawing him ashore without endangering their own lives.

Such rope should have inflated gutta percha or some other buoy attached to one end of it. It is ever dangerous for even a good swimmer to approach near a man struggling in the water;



PLAN OF THE CHAMBER FLOOR.

with such a rope he could give aid without danger. One going into the water alone, might attach a rope to some object on shore, and to his person in such a manner as to draw himself ashore, when in danger.

— P.

HORN AIL.

I have a valuable cow, which I suppose has got the horn ail. I have bored her horns; they discharge putrid matter; she also discharges from her nose. Is it best to saw off her horns? Please advise me in your next, and much oblige an old subscriber. ZIBA ELDRIDGE.

Taunton, June 29, 1857.

REMARKS.—We give the following, relating to this matter from Dr. DADD's Reformed Cattle Doctor.

"On applying the hand to the horn or horns of a sick beast, an unnatural heat, or sometimes coldness, is felt: this enables us to judge of the degree of sympathetic disturbance. And here, reader, permit us to protest against a cruel practice, that is much in fashion, viz., that of boring the horns with a gimlet; for it does not mend the matter one jot, and at best it is only treating symptoms. The gimlet frequently penetrates the frontal sinuses (cavities,) which communicate with the nasal passages, and where mucous secretion, if vitiated or tenacious, will accumulate. On withdrawing the gimlet a small quantity of thick mucus, often blood, escapes, and the interested operator will probably bore the other horn. Now, it often happens that after the point of the gimlet has passed through one side of the horn and bony structure, it suddenly enters a sinus, and does not meet with any resistance until it reaches the opposite side. Many a 'mare's nest' has been found in this way, usually announced as follows: 'The horn is hollow!' Again, in aged animals, the bony structure within the horn often collapses or shrinks, forming a sinus or cavity within the horn; by boring in a lateral direction the gimlet enters it; the horn is then pronounced hollow! and, according to the usual custom, must be doctored. An abscess will sometimes form in the frontal sinuses, resulting from common catarrh or 'hoose;' the gimlet may penetrate the sac containing the pus, which thus escapes; but it would escape, finally, through the nostrils, if it were let alone. Here, again, the 'horns are diseased,' and should the animal recover, (which it would, eventually, without any interference,) the recovery is strangely attributed to the boring process. An author, whose name has escaped our memory, recommends 'cow doctors to carry a gimlet in their pocket.' We say to such men, lead yourselves not into temptation! if you put a gimlet into your pocket, you will be very likely to slip it into the cow's horn. Some men have a kind of instinctive impulse to bore the cow's horns; we allude to those who are unacquainted with the fact that 'horn ail' is only a symptom of derangement. It is no more a disease of the horns than it is of the functions generally; for if there be an excess or deficiency of vital action within or around the base of the horn, there must be a corresponding deficiency or excess, as the case may be, in some other region.

'Horn ail,' as it is improperly termed, we have said, may accompany common catarrh, also that of an epidemic form; the horns will feel unnatural if there be a determination of blood to the head; this might be easily equalized by stimulating the external surface and extremities, at the same time giving anti-spasmodic teas and regulating the diet. The horns will feel cold whenever there is an unnatural distribution of the blood, and this may arrise from exposure, or suffering the animal to wallow in filth. The author has been consulted in many cases of 'horn ail,' in several of which there were slow fecal movements or constipation; the conjunction of the eyes were injected with yellow fluid, and of course a deficiency of bile in the abomasum, or fourth stomach; thus plainly showing that the animals were laboring under derangement of the digestive organs.

Our advice was, to endeavor to promote a healthy action through the whole system; to stimulate the digestive organs; to remove obstructions, both by injections, if necessary, and by the use of aperients; lastly, to invite action to the extremities, by stimulating liniments. Whenever these indications are fulfilled, 'horn ail' soon disappears."

—

WARTS ON COWS' TEATS—SCRATCHES ON HORSES.

Can you or any of your subscribers give me a remedy that will cure warts, on the teats of a valuable cow? Also a remedy for the scratches on horse's feet? O. H.

Lebanon, Me., July, 1857.

N. B. Are these apples eaten by the curculio, spoken of by S. Fletcher in, an article headed "No Apples this Year?"

REMARKS.—We cannot answer your first inquiry. Scratches may be cured by keeping the fetlock clean and oiled with any clean, soft oil.

The curculio does not eat the apple, but deposites its egg in it, which causes it to fall to the ground, when the young grub leaves the apple, goes into the ground, and comes forth a perfect beetle, or curculio the next year.

A HEN STORY.—I had a hen that hatched fifteen chickens—ten pullets and five roosters—about one year ago. I raised them all. Last fall I sold off all of my old hens and all my roosters, both old and young, keeping only my ten young pullets for layers. They commenced laying in November and have continued constantly ever since. This spring, had a present of a rooster, but still the half Shanghae and half Creeper pullets have not forgotten to lay every day. But the most remarkable feature of their character is that they have never wanted to set. I would recommend every farmer to keep ten pullets, and feed them well, rather than go into the hop-raising business.—P. K. T. *in the Oxford Democrat.*

THE GRAPE CULTURE IN CALIFORNIA is large and increasing. In ten counties 12,857,225 pounds of grapes were produced last year, and this year the total will be 14,000,000. From this crop, the city of Los Angelos makes 150,000 gallons of wine, and 6,000 gallons of brandy.

☞ Mr. Everett has engaged to deliver the address at the fall fair of the New York Agricultural Society, at Buffalo.

For the New England Farmer.

MAKE HAY WHILE THE SUN SHINES.

O, yes, we always do, but we *mow* it while the dew is on.

MR. EDITOR:—While reading an article in your last, taken from the *Homestead*, headed, "Make Hay while the Sun Shines," I found so many items about hay-making that crossed my grain, that I can hardly refrain from adding a chip from my experience of ten years in farming, in which I have cut and put up from one to two hundred tons of hay per year.

After trying various experiments, I adopted this one plan of getting hay, as far ahead of any other. Mow the grass while the dew is on, and make it while the sun shines. Dew is nothing more or less than vapor condensed, and is as readily evaporated from mown grass, if properly spread, as from standing grass. Mowing, I *lead* my men in the field, at earliest dawn; each man with two sharp scythes, so as to have no stopping, except for breakfast, and mow around the field that we intend to cut; calculating so as to have it finished by ten or eleven o'clock, A. M. All the scythes are carried to the grind-stone, which is turned by horse power, (a very great improvement, by the way, for one who has a power.) While one hand is grinding, the others spread and "shake up" what hay the boys have not finished. Thus, all the lighter work comes in the heat of the day, and I find that it causes much less back-ache to dry dew-wet grass, than to mow *dry grass*, and there is no difficulty in drying it in good weather. In bad weather, I arrange my work accordingly.

We can mow more grass in one hour in the cool of the morning, than in two hours at noon-day, when the fine grass cuts like wood, and the coarse like wire. I think the writer of that article has never sweat "like a man a mowing," or, he would never advise mowing grass after the dew is off. I infer, also, from his "setting out for his winrows," that he uses no horse rake. I use the wheel horse rake, and it as far excells the back-breaking hand rake, the clumsy revolving rake, or the boy-killing drag, as the mowing machine is superior to the common scythe. Now if your readers will just lay aside all other kinds, and *try* the wheel rake, they will rake over more and rougher ground, cleaner, with less power, and more ease, than with any machine ever used.

After dinner, while the boys are getting the teams and rakes, the others are turning and shaking. As soon as dry, commence raking around the piece, enough for two rows of tumbles, tumble with the horse rake, and start the team with two to pitch on to each load; by hauling the rack long, wide and flat, one can easily load for two to pitch. If you have two teams, have two rakes. Soon as one team is loaded, to the barn, and start the other, (the extra pitchers assisting at both loads,) around the piece. The boy and horse rake raking the scatterings towards the centre; avoiding the necessity of driving over raked ground, or raking the same ground more than twice. Thus a boy fourteen years old will rake, tumble up, and rake after as much hay as a team with two to pitch on can draw; or as much as *six* men with hand rakes; and do it up clean.

Pitching off and mowing in our old fashioned barns, the old way of "sweat and pitchfork" is perhaps the best. It is a well known fact, that the sooner the hay is pitched off after it is loaded, the less work it requires to do it. Therefore, unless caught out late, never let a load stand over night. I find it a great improvement to build chimneys in my hay-mow, to carry off the heat and vapor, thus preventing the heating and moulding in the mow. Set four long, slim poles in the centre of the mow, about one foot apart. Nail short pieces of boards to keep them in, and fix a flue from the bottom to the outside of the mow, to let in the cool air, and a current of air will be formed and carry off the heat, and cure the hay, if put in quite green, so that it will come out next winter, fresh and sweet as new mown hay.

"I have," says the writer, "never gained anything by putting my men at colossus work before breakfast." My experience is entirely to the contrary. I have not only gained by working my men in the cool of the day, when they are full and strong, but have lost much, when obliged to mow two hours before dinner; finding myself and men too much exhausted to work or eat, and altogether unfit for pitching in the afternoon. Now does this not seem a more reasonable and practical way of doing up the haying? I have practised and found it, with the other operations on my farm, so profitable, that I find myself a little "above board;" and feeling somewhat weary from continued hard labors, I feel disposed to take the world a little more easy. To do so, I shall sell my home farm, situated two miles north from the thriving village of Rutland, Vt. A beautiful location, and more particularly described in the advertisement on another page. Your subscriber on Cream Hill.

WHOA HAW HUSH.

CABBAGE INSECTS.

Anbury, or finger and toes, and lice on cabbage.—Probably the very best specific for the dire disease of Anbury on cabbage, is wood ashes. As this in all country places is extremely easy to be got at, it would be well for all those who take an interest in their garden, to have this material saved for it, instead of giving it to the "soap man." For independent of its utility for this purpose, it is fine for keeping in check the fly on cabbage, and it is well known as a useful agent in the way of manure. What we would advise is this. Have it always collected and kept dry, in barrels or otherwise, until wanted for use, and especially during the season of making, the Winter.

In the Spring, if more is accumulated than is likely to be wanted for use in cabbage planting or dusting to keep off insects, apply it to the ground, and plow or dig in with other manures.

At the time of planting cabbage, get some of this wood ashes, and about its equal bulk of sand, and mix together; take a stick or crowbar, and make a hole where each cabbage is to go, and fill the hole up with the mixture—set the plant with a dibble thick in the centre, and no Anbury will ever trouble the plant, providing there was none on it at the time of planting.

Perhaps this is too much trouble for many who read this, and inapplicable for the immense numbers planted—in such case a tolerable good substitue consists in making a "mush" of the same material, thick enough to allow it to adhere well to the roots, and dip the same into it before planting. This has been found a good preventive in

many cases. It is always worth doing, however, on land where plants are known to be affected, in the case of cauliflower or broccoli, which gets it sooner than the cabbage itself.

A good deal can be done in ridding cabbage of lice, if seen to in time, and that is directly after they make their first appearance. Tobacco dust would prove effectual, only that it cannot be made to lay on the shiny leaf of a large cabbage. Other remedies are, lime dusted over them, and wood ashes.—*Country Gent.*

LAMENESS FROM CONTRACTED HEELS.

A farmer of Niagara county, New York, states some important facts in relation to the proper and improper way of Shoeing Horses. He says:

"About six months since I adopted a plan for the cure of this complaint, which has been so successful in three cases, that I am disposed to communicate it. My opinion is, that nine-tenths of the foundered horses are made so by the shoer. For a number of years my horses were shod by one man, who fitted his shoes very carefully—opened the heels handsomely, by trimming the frog and the heel of the hoof, and thinned the sole nicely, taking off all appearance of bars—making the shoe nearly straight from the ball of the foot to the heel. First, one horse became lame in one foot, then in the other; soon another one began to be lame, and in spite of all our experiments, the third one was beginning to show the effects of this shoeing, when I changed the practice. Now the two latter are perfectly sound, and the first one, that had become so bad that it was painful to drive her even upon a walk, is so much improved that she feeds and acts like a different animal. Now for the plan.

Pare the foot pretty close; thin the sole in front of the bars, but cut no more off the bars than that the shoe may not press upon them; fit the shoe to the shape of the foot, making it come fairly under the heel of the hoof and as wide as you can have it and get the nails in. Do not open the heels—at any rate cut nothing from the frog, whether ragged or not; if you choose you may take a very little from the heel of the hoof where it comes in contact with the frog, but the practice is questionable. I think the bars and the frog are intended to keep the heels apart; therefore, save all the strength you can in the former and do not disqualify the latter from accomplishing its object by putting it away so that it cannot come in contact with the heels. Now cultivate the growth of the frog by applying daily either soap and tar boiled together, or soft soap, or urine, which I think best of all. Take up the foot, clean it out carefully, and make your application to the sole of the foot, the frog and the heel. Standing in mud of blue clay for a few hours every day, is excellent."

Two Crops of Pears in a Year.—S, O. West, of East Brookfield, informs the Boston *Journal* that he has a pear tree which last year blossomed at the usual time, and the fruit set and grew finely. In July it again blossomed on wood of the same year's growth, the fruit set and both crops ripened. This year the same tree has again blossomed for the second time, with a prospect of raising two crops.

For the New England Farmer.

NATIONAL TRIAL OF REAPERS AND MOWERS.

Mr. Editor:—The National Trial of Reapers and Mowers, under the direction of the United States Agricultural Society, has been successfully terminated, and as I do not find that the worthy Treasurer has chronicled it for your columns, I will endeavor before leaving to give a brief review of the most prominent features. The details of the Exhibition, the "pomp and circumstance" with which it was inaugurated, the distinguished gentlemen in attendance, with the hospitable entertainments of the Syracusians, have been noted down by an array of professional reporters, and, ere this, I suppose, are known over the length and breadth of the land.

It was, however, something more than a "festival." The high price of agricultural labor, and the necessity for securing grain crops without delay when they are ripe, has doubtless convinced every man who has a hundred acres to be mown or cradled that he should own a "machine." The question then naturally arises, "*what machine shall I purchase?*" There have been trials in abundance, in various sections of the country, where committees have given decisions after seeing two or three machines cut an hour or two each. But it was reserved for the United States Agricultural Society to bring into competition the best machines in the republic, and to submit them to a thorough and accurate trial, before a jury composed of nineteen practical men, coming from sixteen different States. The conception and carrying out of this excellent idea belongs to Col. Wilder, of whom Horace Greeley so truly remarked, (in an editorial written here for the New York *Tribune*,) "He is not in public life, and we believe does not aspire to be—he has by diligence in business acquired a competence, and has attained an age at which most men in comfortable circumstances are inclined to throw aside the cares and labors of active life, and enjoy that repose for which they have honorably struggled so long. Yet Col. Wilder continues to give his time, his means, and his best energies, to the cause of agricultural progress, with the enthusiasm of youth, and a constancy befitting the prime of life. Long may he live to pursue his career of honorable usefulness, and at its close may a fit successor be found to follow in his footsteps."

The citizens of this saline city were not backward in affording all necessary facilities, and the owners of the good farms in the vicinity tendered the use of fields of grass, rye and wheat, measuring in the aggregate over four hundred acres. They also gave bonds for a guarantee fund of fifteen hundred dollars, to be assessed for any deficiency of the receipts to meet the expenses. Through the good management of Col. Wilder, this liberal "backing-up" was not required, as the entrance-fees ($50 a machine,) paid the bills.

On Monday, the 13th, the competitors were generally on hand, but I regret to be forced to state that many of those at Syracuse, with others who remained at home, had not the courage to "face the music." They will of course be reported as having "failed to appear," and no one can think much of machines in which the owners have so little confidence as to evade a fair testing of their capabilities.

Those who had the manliness to enter the lists, were engaged on Monday in gearing their machines, and in trying the teams. There was the veteran Obed Hussey, of Baltimore, who claims to be the "original" inventor, and who had as his youngest bantling a mammoth reaper, which cuts a swath of ten feet. Equally advanced in years, (although it is but recently that he had invented the machine which he brought,) was Pells Manny, father of the late J. H. Manny, whose widow enjoys a large income from her husband's patent. It was to these J. H. Manny machines, with Wood's improvement, that premiums had been awarded the week previous at the Maryland, and at the Ohio State trials, so that the gentlemen from Hoosick Falls had high hopes of success. Previous triumphs had also inspired with confidence Mr. Allen, of New York, and Mr. Ketchum, of Buffalo, while Mr. Caryl of our State, had the approval of the Boston gentlemen who assume supremacy in the agricultural matters of Massachusetts. Light machines constructed entirely of iron, from different parts of the State of New York, attracted attention, as did the "Kentucky Harvester," which has met with a large sale this year at the west. The examination of the machines and the opportunity of conversing with the inventors and patentees, was to me the most interesting feature of the exhibition.

Others have probably informed your readers how on Tuesday, (after the opening ceremonies,) nineteen machines clattered off at once in a badly lodged field of clover, and how on Wednesday and Thursday, some twenty-five mowing and combined machines were tested in groups of four in large fields of timothy. On Friday, fourteen reapers were set at work together in an uneven field of rye, and the remainder of the time has been occupied with "dynamometer" tests in wheat, rye and grass fields. The committee, sub-divided into classes, were at work from "early morn till dewy eve," and never, I will venture to assert, has there been such a thorough, impartial *trial in the field.* Every feature of the construction, principles and actual working of each machine has been carefully scrutinized, and duly recorded.

A "dynamometer" recently invented by Mr. Leonard, of the American Institute, at New York, worked to a charm until put to practical use, when the motion of the machines to which it was applied threw it out of gear, and soon used it up. Fortunately, there was an "oil dynamometer" on the ground, belonging to Emery Brothers of Albany, which enabled the committee to prosecute their experiments. They also had a simple apparatus for testing the "side draft" of the machines, but the close observation of such practical men was, after all, of the most value. Some mowers which worked to a charm when drawn at a fast walk by quick-stepping heavy horses, absolutely failed to cut when worked at a slow pace.

When the reapers went into the field, McCormick's was among them, a brother of the inventor having arrived the night previous. Nothing could be finer than the way in which this trans-atlantic favorite cut up a rather steep hill. Hussey's mammoth machine did not work at all, and others were forced to give up, although they did their best.

The report of the Board of Judges will not be made until the annual Exhibition of the Society, which will take place at Louisville, Kentucky, the first week in September. It will contain the "tabulations" and the "calculations" by which the verdicts will be decided, and will prove a valuable contribution to agricultural literature. In these days, when fire engines are made the prominent feature in some "agricultural (?) exhibitions," and in others horse-trotting is inaugurated by eloquent divines, it will be refreshing to have an authentic record of an Exhibition which cannot fail to be of real practical value to the yeomen of the land.

ESSEX NORTH.

Syracuse, N. Y., July 21st, 1857.

SALT.

Common sea salt (chloride of sodium) is an article, the importance of which, in its action as a purifier in some chemical processes, has been but recently known extensively. Scores of processes affecting the preparation or rectification of various important materials involve the employment of this cheap chemical with other ingredients, under intense heat, and one of the processes for making steel, which has lately attracted considerable attention, consists in purifying scrap iron by salt, and carbonizing it with the same materials used for years in the simple "case-hardening" operation.

According to some of the foreign journals, the addition of salt to the materials in the smelting and puddling furnace, has been attended with very beneficial results in the quality of the iron produced. But all these uses are at present trifling compared to the immense quantities of this material used in the preservation and seasoning of food.

The amount of salt consumed in this country (for various uses) including the salting of hay, &c., for animals, the salt inserted between the timbers of vessels to preserve the wood, and the like, is about sixty pounds to each inhabitant. There are about twelve million bushels of salt manufactured within our limits per annum, and about fifteen million bushels imported. The salt is manufactured partly by boiling, and partly by evaporating in the sun. The cost of manufacturing by these processes is about equal, and the product is of about equal value, pound for pound; but the solar salt weighs about seventy pounds to the bushel, while the boiled salt weighs about fifty-six pounds to the bushel, varying, however, according to the position of the kettles, to a weight considerably above, and also considerably below the standard. Onondaga county, in this State, furnishes about half of the whole quantity manufactured in the United States. The brine for these works is obtained altogether from springs, and the salt is reduced to the cyrstaline form almost exclusively by boiling. The amount manufactured at the solar works of Onondaga in 1856, was about half a million bushels. The quantity manufactured in kettles in that county at the same time was five and a half million bushels.

A recent letter from S. Hotaling, a prominent salt merchant of this city, in answer to one from a committee of the British Parliament, on the salt trade of our country, after presenting much of the statistical information already given, describes a salt block at Onondaga, of the largest size, as made of brick about twelve to fourteen feet wide, four to five feet high, and forming two parallel arches, extending the whole length of the block. Over and within the top of these arches, are placed common

cast iron kettles, holding about fifty to seventy gallons of brine, placed close together in two rows, the whole length of the arches. A fire built in the mouth of the arches passes under each kettle into a chimney, built generally fifty to one hundred and fifty feet high, averaging from fifty to seventy kettles in each block. A single block with one row of kettles is about half of this width.

Any improvement in the manufacture of salt which could cheapen its production only by a very small per centage, would be an invention of no ordinary importance; and we think the field, although the subject is occasionally dabbled in with various degrees of success, is much less the scene of competition among inventors than many others of less magnitude.—*Scientific American.*

For the New England Farmer.

AN ENGLISH CATTLE SHOW.

BY H. F. FRENCH.

IPSWICH, COUNTY OF SUFFOLK, ENGLAND, JULY, 1857.

Seeing a notice in the papers that the Suffolk Agricultural Association was about to hold a public exhibition, I took the train from London, and came out here, sixty-eight miles, to attend it. By mere accident I was set down at the famous Inn called the White Horse, the scene of Mr. Pickwick's adventures on the occasion when he, by mistake, entered the chamber of a lady by night, in endeavoring to return to his own. It is one of the interesting circumstances about travelling in England, that one is daily finding something to remind him of some striking event in history, or some noted individual, or some fiction of literature, to interest him.

Besides being the scene of the adventures of Mr. Dickens's most noted character, Ipswich is the birthplace of Cardinal Woolsey, who founded here a school, which is still supported; and as one looks at the old place, not the house, for it is gone, where the great man first saw the light, the sentiments which Shakespeare has put into his mouth constantly recur to mind. The cardinal rivalled his monarch in the splendor of his palace and retinue, yet in the end, in his sorrow and remorse, cried out—"O, had I served my God with half the zeal I've served my King, he would not, in mine age, have left me naked to mine enemies."

But a stranger circumstance than these impresses me at this moment. I am writing on the morning of the fourth of July, at the mansion of an English nobleman, who kindly insisted on bringing me to his fine old English homes, from the exhibition dinner of yesterday. The first object that met my awakening eyes this morning, is a large engraving, a copy of a splendid piece of plate, presented by the citizens of Suffolk county to an ancestor of my host, for his distinguished services in a naval engagement in the war of 1812 between England and the United States. I shall not so far violate hospitality as to give any clue to the particular action thus commemorated, but I cannot help copying a line or two from the inscription, which explains the design in part thus: "Britannia, borne on a seahorse, holds the trident of Neptune in one hand, while with the other, she hurls her thunders on the American eagle that is expiring at her feet." This is but one feature of the engraving; but it gives the key to the design. Now is not that a picture for an American to open his eyes upon on Independence day, in a foreign land? But I had my turn yesterday, in an after dinner speech, at the exhibition, in which I modestly alluded to the extent of territory, and the resources of the nation over which this same old bird, which fortunately survived the thunderbolts of Britannia, now spreads her triumphant wings, and when, in conclusion, I offered a sentiment expressive of the hope that peace and good will might always continue between the two countries, it was greeted with cheers and shouts of applause, far more grateful to the ear than the thunders of victorious cannon. I may add, by way of conclusion, as to the dinner which closed the show, that an English lord, the Earl of Stradbroke, the President of the society, presided at the table, that English noblemen of distinction were present, that some three hundred of the most substantial proprietors and farmers of Suffolk were at the banquet, and that, with no other introduction than a general introductory letter from the United States Agricultural Society, I was received with honor, and placed in a position to indicate the respect shown to the society and country which I represented.

This is worthy of notice, because it indicates what is now felt everywhere in England, the kindness and good feeling which exist on the part of the English people towards our country. With this long preamble, I will return to the more strictly agricultural topic, with which, when I took my pen, I intended to fill this sheet.

THE HORSES.

The conspicuous feature of the exhibition was the great array of cart horses, for which this county is celebrated. The number of entries for horses and colts for agricultural purposes was one hundred and fifteen. The Suffolk cart horse is a long, low posted, large legged, thick set, heavy draft horse, of monstrous size, weighing from fifteen hundred to two thousand pounds. There were several on the field that I have no doubt exceeded the latter weight. They are almost uniformly of what is here called a light chestnut; or nearly as light as what we call a sorrel color with us, with a light colored mane and tail. They must be very slow, as their common days' work at the plow is seven hours, and they plow but one acre. For mere draft horses they must be very valuable, but are good for noth ing else.

There was a large show, to the number of nearly two hundred, of horses for riding purposes. These horses are of various blood, crossed more or less with the race horse, but having no very distinctive marks. A few of them were shown as hunters, and were required to leap a hurdle, a sort of rail fence, of four feet in height. This sight, quite novel to me, attracted much attention. The riders first galloped their horses round the field, then rode them down a sort of lane fenced in, and at a moderate gallop rode at the hurdle, which the horses all leaped with very little apparent effort. The hurdle was on the side of a hill of moderate declivity, and the horses were jumped two or three times each over it, up hill and down. From what I observed, I am inclined to think that we have nothing to gain by borrowing any stock of this kind from Suffolk county.

Our Morgan stock seems to me better adapted to our general want of carriage horses, than anything I have yet met with. The Suffolk cart horse might, perhaps, be introduced into our cities for the drays with advantage. Premiums were also awarded for ponies, which are much used by the children of the nobility for riding, and by their ladies for driving in little carriages. The ponies here, however, were of no distinct variety, but a sort of cross, I should think, between some small breed and common horses.

CATTLE.

The Suffolk cow is a peculiar animal, unlike anything I have before seen. She is a small, red animal, without horns, more resembling the North Devons with their horns knocked off, than anything else. They are sound, compact and hardy, and good milkers for their size; on the whole, the cows and bulls of this breed strike me as very suitable to the climate and pastures of New England.

It is said that the French, at their exhibitions, give a decided preference to cattle without horns, because they are not so dangerous to handle! I was present in a cow-house last evening, where men were milking these cows, and observed that they tied their hind legs together with a rope before commencing operations. I inquired the object, and the reply was, "that the cows would sometimes kick the milk over, if they did not confine their legs." The cows seemed perfectly gentle, and did not even resent this indignity, but submitted to it as part of the established system of the country. The oxen are worked here in collars and harness, with blinders and bitts, and driven with reins like horses.

SHEEP AND SWINE.

The entries for premiums on sheep were not very numerous, thirty-two pens only being filled. The sheep were of three varieties, the Southdown, the Cotswold and the Leicester, and all appeared to me who have no great knowledge of sheep, to be fine animals. Sheep husbandry is perhaps the leading feature in English agriculture, without which the farmers say they could do nothing with their land. After better opportunities for investigation, I can speak more safely on the subject, and with this remark I will pass over the topic. The swine exhibited, were mostly of two varieties of the Suffolk, the black and the white. This is the county from which the Suffolk pigs, which have been and are still so much in demand in New England, are exported to the United States. I was introduced to the gentleman who has supplied most of those which have been sent to Massachusetts. He is a noted breeder both of swine and short-horn cattle. I have accepted an invitation to visit him at his home, and examine his stock and that of his neighbors.

The whites only have been introduced into the United States, so far as I know. The blacks, I think are rather preferred for home use here, but their mode of using the flesh of swine in this country is different from ours. What is called bacon is found on almost every table at breakfast, and is the meat of small hogs, less than a year old, cut through and through, and cured dry. I have not yet met with anything like our salt pork, during my wanderings abroad.

The black Suffolk swine seem to be somewhat longer and thinner than the white, and with less uniformity of shape, although the color of all was wholly black. When properly dressed, the color comes off, I am told, and the skin is nearly as white as that of the other variety.

FARM IMPLEMENTS.

Several portable steam-engines in operation, carrying threshing machines, chaff cutters, and adapted to be changed to other uses, were on exhibition.—Steam engines are coming rapidly into use for farm purposes in England. They are portable, but not locomotive. They are on wheels and can be moved, but do not travel about by their own power. I noticed but one reaper, and that was McCormick's, as the exhibitor informed me, much improved. The hand tools, such as rakes and forks, were about of the weight and make of those that the Pilgrim Fathers carried over in the Mayflower, such as a Yankee would resolve into their elements of fire wood and old iron directly.

The plows here are so entirely different from ours that I dare not hazard an opinion of their comparative value, till I have myself followed one in the furrow. The plow in common use on light land here is nearly double the length of our Boston plows, and weighs two hundred and eighty pounds. Of what use all this length and weight can be, I have not been able to discover; but as the furrows are laid always here perfectly straight and uniform, and the work is done much better than we do it at home, the English plowman has good reason for claiming that his plow is the better of the two.

A plowman here is a plowman always, and doubtless has more skill than our farmers in holding the plow. The land is entirely free from roots and other obstructions, and the fields are generally large, so that he ought to do good work. I amuse myself often in talking with the plowmen here about our plows, which they think cannot be fit for any use. Of one thing I am quite certain, that an English plow would be utterly useless on most New England farms. With all their weight, two yoke of oxen would break one to pieces in a moment against a stump, and the long beam and handles would be entirely unsuited to the variations of surface, and the obstructions with which we meet. Again, the length of the plow compels them here to leave a wide headland, and to dig up with a spade a large corner, most of which one of our plows would turn over.

While here, I have witnessed the operation of a new steam plow, just invented, and have seen it plow an acre in an hour. It is entirely different from the one I saw in France, which I think I mentioned in a former letter, but as my letter is already too long, I will defer any description of it.

I intended to notice the short-horn stock shown at the Suffolk Exhibition, but as I am going immediately into the neighborhood of some of the best breeders of it, where I shall see all they have, and not merely the selected animals, it is as well to defer any particular notice of it. I find ample opportunity to examine everything in the way of agriculture, and have many more invitations to the homes of farmers and of noblemen than I can accept.

My impressions of the hospitality of the English are becoming more and more favorable. That I am an American, and interested in agriculture, seems to be sufficient to open all doors and all hearts to welcome me, and he alone who has wandered far from home knows how properly to appreciate such kindness to a stranger. H. F. F.

For the New England Farmer.

HORN AIL.

MR. EDITOR:—I am desirous of saying to your readers that the cruel and absurd custom of *boring* the horns of animals, and turning in pepper, salt and vinegar, to relieve the animal of disease, is a barbarous practice, and because some have survived the operation, it is no evidence of its utility. Never bore a horn; the horns and hoofs are protections, and are the last things that need doctoring. I purchased a young cow very cheap, that had been doctored for the horn ail. The first thing I did was to putty up the holes in her horns, tarred her nose, and gave her one-half peck of turnips every day at noon with her hay, for eight or ten days; after which time, she fared with the rest; and I kept her years after, without any sign of disease.

The supposed cases of horn ail have been the source of more mal-practice than any other, particularly on old cows and oxen thin of flesh; such stock is forced to eat meadow hay, and not the best at that, with a cold and open barn for a shelter, in our varying climate. Cattle so kept, without roots and a change of food, will lose their appetite, and of course lose flesh; and, as a consequence, have less vigor to withstand the changes of climate, and are more susceptible to disease. Such stock often have a cold in the head; the nose is stopped, and the natural drains of the head being closed, produce cold horn, giddiness, loss of appetite, a watery discharge at the eyes, &c. For symptoms like the above, Mr. Gleason, of Wayland, has a prescription that has the most philosophy of any I have seen, and, withal, works well. "Put a half table spoonful of spirits of turpentine on the head between the horns, and then with a syringe inject into the nostrils a solution of vinegar, salt and pepper, which will cause a discharge at the nose." H.

For the New England Farmer.

HAIR SNAKES---DAMPNESS IN WALLS.

DEAR SIR:—When a boy I was taught by my school-reader ("Flint's Lectures," I think,) that a horse hair put into water for about two weeks in August would become animated, and changed into a hair snake. I became interested in the subject, and tried the experiment; but could never vivify the hair.

These old recollections caused me to read with interest the articles on this subject on pages 40 and 191 of the present volume (9) of the *Farmer*. Since then, in an article on the organic contents of waters from the Thames, and other sources, by Edwin Lankester, M. D., F. R. S., published in London, in the *Civil Engineer and Architect's Journal* for 1852, page 407, I found the following: "Thus it is known that the stickleback swallows the eggs of a species of eutozoon," [that is an intestinal worm, an animal living in some parts of another animal—ED.] "called Bathriocephalus; but while inside the fish, these eggs never develop into a perfect eutozoon; but if the fish is eaten by a bird, the creature becomes perfectly developed. The *gordius*, or *hair worm*, deposits its eggs in water, but the eggs are not developed in this position; they are first swallowed by insects, and in this position the egg is hatched, produces the gordius, which becomes impregnated, and escapes from the insect into waters, where it deposits its eggs."

On page 259 of No. 6, Vol. 9, Mr. Wells, of Ohio, makes some inquiries respecting dampness in brick houses, which were not replied to in the following number. Dampness in brick and stone houses may arise from three causes. First, by capillary attraction from the ground. Second, from driving storms beating against porous stone or brick. Third, from the walls being thick, and, therefore, not changing temperature so quickly as the atmosphere. Thus, when a warm, damp day succeeds a cool one, the moisture in the air will be condensed in drops, as it comes in contact with the cooler walls; the same effect will be produced by a glass of cold water on a warm day in summer. The remedy for this latter cause is to furr off and plaster, leaving a space of confined air inside the brick or stone wall. For the second cause, apply a mastic or water-proof cement, paint, or wash; and for the first, in building, put in a strata of asphalte,

slate or other substance impervious to water, just above the ground line. To prevent damp from ascending the walls of a house already built, [*Loudon's Encyclopædia of Cottage, Farm and Villa Architecture*, published in 1846, page 246,] introduce a water-proof medium through the wall, just above the level of the ground, in the following manner:—First make a hole through the wall, over the ground course, taking out 2 courses in height, and 2 bricks in length; consequently, the hole will be 6 inches high, and 18 inches wide. Then fill up one-half this hole at one end with two courses of sound bricks laid in Roman cement. It is clear that the operation could not injure the wall, the width of 18 inches not allowing of any settlement; 2 courses more of nine inches in width are next removed, making the hole again 18 inches wide; the half of which is then filled in with bricks and cement, as before. The operation is to be repeated until the whole of the walls of the house are underpinned by 2 courses of hard bricks, and 3 joints of Roman cement, constituting a water proof septum, through which the damp cannot rise.

Yours truly, O.

Worcester County, July, 1857.

For the New England Farmer.

HOW TO TRANSFER BEES.

Mr. Editor:—I have often thought of writing a little for the *Farmer*, though some may think that a minister of the gospel should not be dabbling with every thing; yet I know of no reason why a minister should not be interested in every thing that promotes the welfare of the human family. I have been highly entertained with the information obtained through the *Farmer*. I have a few words now, on one department of the management of bees.

The best, and indeed the only successful plan that I have ever seen, for changing old swarms into new hives, is the following. Make the hive of good inch boards, fifteen inches high, thirteen inches deep, and ten inches and seven-eighths wide. This is the inside measurement. It should be put together with screws. By putting the front and back boards *on* to the side boards, it will be nearly square on the outside. Instead of the top board, put in *slats* made of inch boards, the under side of which must be chamfered to an edge, the whole length of the centre. The ends of the slats to be let in with a groove. The width of the slats on the upper side should be one inch and an eighth, and three-eighths of an inch apart.

Now place this hive where the old hive is, and put the old hive on the top of the new one. Stop the entrance to the old hive. At this season of the year, when there is a plenty of feed, the bees will immediately commence working in the new hive, and as the slats are brought to a point on the under side, the bees must of necessity build their comb lengthways of the slats. Hence you will only need three sticks to support the comb, and those, of course, put in crossways of the slats; two within about four or five inches of the top, and one a little below the middle. And that makes the best hive *for all practical* purposes that I have ever seen. Put a glass in the front or back side, with a slide over it.

After the bees have worked a sufficient length of time to have young bees in the new comb, take off the old hive (lay a board or slide over the new one) carry it off a few rods, turn it bottom side up, and rap gently on the hive, and as the bees crawl up, brush them off carefully with a wing. They will return to the new hive. Should a few linger in the hive, carry it into the cellar, leave the windows open, and in a day or two all will leave.

A. A. Constantine.

East Wallingford, Vt., July 18th, 1857.

WINE AND LARD PRESS.

Our neighbors, Messrs. Nourse & Co., have for sale a small press, to be operated by hand, a representation of which we give herewith. The press is of three different sizes, the capacity of the tub varying from about six quarts to eight or ten gallons, well and strongly made, and admirably adapted for farmers' use, as it may be employed in pressing lard, the making of wine or cider, or in the numerous uses which would be found for such a machine, were it always at hand.

Price from $5,00 to $10,00.

A Pigeon Flight from the Arctic Regions.—Sir John Richardson states that "with respect to Sir John Ross's pigeons, as far as I can recollect, he dispatched a young pair on the 6th and 7th of October, 1850, from Assistance Bay, a little to the west of Wellington Sound, and on the 13th of October a pigeon made its appearance at the dovecote in Ayrshire, from which cote Sir John had the two pairs of pigeons which he took out. The distance direct between the two places is two thousand miles. The dovecote was under repair at this time, and the pigeons belonging to it had been removed, but the servants of the house were struck with the appearance and motions of this stranger. After a short stay it went to the pigeon-house of a neighboring proprietor, where it was caught and sent back to the lady who originally owned it. She at once recognized it as one of those which she had given to Sir John Ross; but to put the matter to the test, it was carried into the pigeon-house, when

out of many niches it went directly to the one in which it had been hatched. No doubt remained in the mind of the lady of the identity of the bird. By what extraordinary power did this interesting bird find its way, and by what route did it come?

SOIL---PRINCIPLES---ROTATION.

It should be an object of the farmer to ascertain the chemical character of the soil he cultivates; that is, what constituents will it give to growing plants upon its surface. This ascertained, he can adapt, to a considerable degree, the plants to the soil by cultivating those which require for aliment the constituents which abound in the soil, or, on the other hand, he can adapt the soil to the plants by adding the substances required for their sustenance; by supplying to the soil what is deficient. Some soils contain all the matters necessary to the nutrition of most of the various species of plants. When such soils cease to be productive, they may be partially restored by *fallowing*; this is a practice in general use in England, though but seldom resorted to in this country. It consists in repeatedly plowing the land, turning under whatever may grow upon it before its seed is perfected, and taking no crop from it. Where land is difficult of access with manure, and it is particularly desirable that it should become fertile, we are inclined to think *fallowing* may be practised with success, even in this country. In other cases, where the soil is deficient in nutritive matters, the requisite substances must be added.

The kind of alkali or earth supposed to be principally needed is *ammonia*, and this is usually supplied from the stable or barn. It may, however, be supplied in another form, disconnected with the decomposing, coarse part of the manure, as in urine, gas-water, guano, in rain and snow water, &c.

Silica, or *sand*, another earth, which is indispensable to the grasses, is sufficiently distributed in all parts of our State.

Phosphate of lime, which is formed from the earthy part of bones and phosphorus, and *phosphate of magnesia*, which is a common earth and phosphorus combined, and, in a small quantity, *potash*, are necessary to most plants.

Wood ashes furnish a supply of potash, and these ought to be saved with scrupulous care. Their value is not yet properly appreciated by a large portion of our farmers. The late Gov. Hill, of New Hampshire, who conducted the *Monthly Visitor* through several volumes with much ability, and whose love of agricultural pursuits amounted to a passion, often declared that a single bushel of good clean ashes was worth one dollar to the crop on many lands. Perhaps their true value lies midway between his *high* estimate, and the low one of farmers generally. Pine wood ashes contains as much potash as those of hard wood, though the common opinion is that they do not.

The cereal grains, in order to the greatest production of flour, must be well supplied with phosphate of magnesia and ammonia; for this reason bone manure is beneficial to grain.

Nitre, now usually called saltpetre, and common salt, are useful in meliorating the soil, and afford both food and stimulant to the crops. Some suppose it will destroy mosses and fungi, but if so, it must be applied in generous quantities. It has been many times stated that it will kill the cut worm, and the larvæ of insects. The cut worm is a tough fellow, and will bear a pretty thorough pickling before he will consent to die.

Fallowing, then, is one mode of restoring exhausted soils, and we hope to hear of experiments in it by practical and methodical men, so as to settle the question whether it is a profitable mode or not. Supplying the stimulating or nutritious matters, is another mode; and the points to be studied in this case are, to learn first what the deficient substances are, secondly, at what time and in what quantities they should be supplied, and then to contrive the ways and means to supply them.

Much, undoubtedly, may be done, by a judicious system of rotation of crops, as some crops exhaust the soil much more than others, clover, for instance, leaving several tons of roots in the soil after the crop is taken off, while flax, ruta-bagas and carrots not only take away what belongs to the plant, but with them a portion of the soil itself.

We well understand the difficulty that the common farmer will meet with in adapting *soils* to plants, and are aware that he must, as a general rule, adapt the *plants* to his soils. What we say, therefore, on this subject, is rather thrown out as suggestions, than with the expectation that we shall be able to offer any clear and definite instruction. It is a matter needing investigation and experiment, but when better understood, must prove of essential service to every cultivator of the soil.

For the New England Farmer.

PROGRESS OF THE SEASON.

July has been remarkable for its extreme heat, and for its extreme moisture. Several days the mercury has risen to 90° and above—once in the shade to 94° at 3, P. M. Vegetation has never progressed with greater rapidity. Corn has changed from six inches to six feet in height, and now promises well. Grain, such as rye, barley and oats, come in well; of hay there is an abundance; much of it will have a *mulatto tinge*, except where hay-caps were seasonably and properly used. We have known the cost of such caps saved, by their use in a single field. From ten to twenty tons of hay has been cut in a day, by the use of a mower, of which there are many varieties, but none that work, in all respects, so well as Allen's.

Our orchards have been smitten by the caterpillar and the canker-worm; and where not, the fruit is falling and leaving, as though it was ashamed of

its abode. For pies and apple-sauce, we shall have to look to Boxford and Andover. Potatoes never looked better. Onions are pricking up their ears, notwithstanding the assaults made on them; the lovers of good eating need have no fear, there will not be onions enough to season their soup. I should think the second crop of grass will almost equal the first. Such is the observations at

August 1st, 1857. SOUTH DANVERS.

EXTRACTS AND REPLIES.

STRAWBERRIES.

It was my privilege, day before yesterday, to partake of as fine a dish of strawberries as I ever met, at our town farm under the care of Mr. Adino Page. I asked Mr. P. where he obtained this fine variety? "In the meadows, upon the farm," said he; "about six years ago, I gathered some of the most promising plants in the field and transferred them to the garden; last year, I reset and fertilized them—the result you have before you."

Thought I, if such be the natural product of our fields, there can be no occasion to pay high prices for superior varieties. For I challenge all the Hoveys in creation to produce berries of better form or better flavor than were those on the Danvers Poor-farm; and I cheerfully summon Messrs. Fay, Loring and Horton to testify in the matter.

July 11, 1857. P.

DOES MANURE EVAPORATE?

There was a statement made in your paper of May 23, by a man who said he did not believe that manure lost anything by evaporation. If it is so, it would save many farmers considerable care and labor; I have a neighbor who takes the trouble to cover every heap he gets out. I wish the question could be satisfactorily settled. Will some one please give his opinion through your paper?

A SUBSCRIBER'S SON.

Cummington, July, 1857.

REMARKS.—Test it for yourself. Saturate some soil with liquid manure, then spread it in the sun, or give it the same exposure that manures commonly have, and see how long it will retain the odor of the manure. It may be said that rains will wash the manure out and the earth catch it. But this does not affect the question, as manure often lays days, or weeks, when no rain falls.

When manure is spread upon a field in the spring, and is not thoroughly plowed under, do you not find it in autumn as dry and odorless as a chip? Can there be any doubt, then, that it loses by evaporation? You may place it under a board or stone, where no rain shall fall on it, but so that the air shall pass over it freely, and it will be dry and without odor.

THE SEASON AND CROPS IN VERMONT.

MR. EDITOR:—Below I make a statement of the condition and prospect of crops in this section of the country, and hope that some of your numerous and able readers in other parts, will do the same, that a general knowledge of the farming interest may be known.

The weather for the last two weeks has been very warm and sultry, with frequent showers, some very powerful, attended by an unusual amount of thunder and lightning—more than was ever before known here by the oldest inhabitant. But it has "done the thing" for corn; should it continue for the next two weeks as it has for the last two, it will be full up with common seasons. Some pieces are already well silked out, and the prospect is very fair for an average crop. Potatoes look well, have a healthy growth, and if the rot does not strike them, a large crop may be expected. Wheat, oats and rye never promised better, though a little late. Grass is heavy. Farmers have commenced haying, and find an uncommon burden—more than last year, though that was considered, in this region much beyond an average. The fruit crop is flattering; apples, plums, &c., bid defiance to 12½ cts. per lb. for dried fruit another year.

People in this vicinity appear to feel thankful, and have every reason to, for what they see, and the bright prospect before them. "MARK."

Marshfield, Vt., July 20, 1857.

GARGET IN COWS.

In answer to an inquiry in your paper, I send you the following. Having had a cow that was almost worthless on account of bunches in the udder which rendered the milk bloody, stringy and not fit for the hogs, I was on the eve of giving her up for lost, when I read in the Boston *Cultivator* that invaluable recipe which in three weeks restored her to perfection, and not the slightest symptom of garget has appeared since. I could cite numerous cases of perfect cure. And not only doubling the quantity, but also improving the quality of the milk and butter. Since I applied this remedy, my cow has, in two years, risen in value from $20 to $75, and cannot be bought for that.

I will now give you the recipe as I took it from the paper. This quantity will be sufficient in ordinary cases, but there may be some protracted and obstinate cases that will require an additional dose.

RECIPE.

"An ounce and a half of hydriodate of potash, at 440 grains to the ounce, will contain 660 grains. This will make fifty-five doses of twelve grains each. Put the whole into a glass bottle of sufficient capacity, with fifty-five table spoonfuls of cold water. Shake briskly, and it will be thoroughly dissolved in a few minutes; one table spoonful will contain a dose, the requisite quantity of twelve grains. Wet a little Indian meal or shorts and thoroughly stir in the dose. Give two or three doses a day. Keep the bottle corked tight."

LOWELL GREENLEAF.

AN INSECT ON THE POTATO.

I enclose an insect which I find is eating the potato tops round here, which I never saw before; perhaps you can enlighten me through the *Farmer*. Since I killed it, it has shrunk up to one-half its original size. W. PROUDMAN.

Globe Village, Southbridge, Mass.

REMARKS.—We have examined the insect sent under a powerful microscope, but it is so jammed and imperfect, that we could only see that it had the most brilliant and beautiful colors. The eye is

perfect, prominent, the pupil a greyish white enclosed in a circle of black; could not ascertain how many legs, but that part of the foot upon which it walks is covered with numerous delicate brushes. It is new to us.

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A PUMPKIN STORY.

Having seen several statements in the *Farmer* about the product of pumpkin vines, I thought I would make one respecting a vine that grew in Isaiah Warren's garden, in this town. I saw the vine growing and the crop harvested. This plant sent out several vines which bore twenty-five pumpkins that ripened, and two or three small ones that did not get ripe. The weight was as follows: the largest one weighed 28 pounds; the average weight 21¼ pounds; whole weight, 531¼ pounds. Can this be beat in 1857?

Fryeburg, Me., 1857. HENRY WALKER.

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A FINE FIELD OF GRASS.

I this day saw a field of grass, twelve acres or more, handsome as a picture. It showered freely at the time, and therefore I could not comfortably go among it. It was situate about three miles easterly of the residence of *the farmer* of Wilmington, on land recently purchased by him, at $2 per acre—a trifle above the government price of land in the Western States. How it could have been obtained at a price so low, I do not understand; though I do know, that much of the land in that neighborhood is very shallow indeed.

There is now growing upon this land a burden of several tons of grass to the acre, of a species of meadow-grass resembling red top at a distance, in height as high as my shoulders—(which are no mean height.) The botanical character of the grass, and its value as fodder, I must leave to be settled by others. The appearance of the field was decidedly fine, just now ready for the mower, if the stumps will admit of its use. P.

South Danvers, July 31, 1857.

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A HAY MAKER.

Please inform me of the price of a hay-maker, if you have one; I mean a machine for turning hay. Will it pay for a turner of small means on forty acres of meadow land, and work where the mower will do a fair thing? J. A. F.

North Clarendon, Vt., 1857.

REMARKS.—We have never seen a machine for stirring or turning hay. The English people have them, and call them "Tedding Machines." They are represented in the English books, and look as though they would do the work of spreading well.

—

ALLEN'S MOWER.

The current is setting strongly in favor of this implement. Many of those who have hitherto used Ketchum's and Manny's, have put them by, and taken Allen's. I have heard several of our best experienced and most candid men say, that they preferred Allen's to any implement they have seen. If I were called upon to advise what implement to purchase, it would be Allen's. The only fault I have heard found with it is,—that it costs near twice as much as it ought to. Experienced mechanics say that it can be made complete in all its parts, of the best of material, for about $60—if this be so, there is no propriety whatever in its being held at $100, and upwards. ESSEX.

July 30, 1857.

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LIGHTNING RODS.

Are lightning rods safe when connected with cast iron, without one rod touching the other at the ends? Please answer through your valuable paper. J. S. ROSS.

Chaplin, July, 1857.

For the New England Farmer.

A STIR ABOUT THE COWS.

MR. EDITOR:—In the *Farmer* of July 4 is a statement respecting a "a fine cow" four years old, which has been milked two years, and gives sixteen quarts of milk every day. In another paper is a statement from Hatfield of a cow which makes 21 lbs. butter per week. The first gentleman, it appears by the date, is a Vermonter, but has no name, and lives nowhere in particular, and the last, although it seems he resides in Hatfield, has no name—of course, I can learn nothing about those remarkable animals by writing to either of them. Indeed, sir, when I read their statements I was strongly inclined to regard them as "fish stories," and so I let them pass. But in your last comes another that beats all. Mr. Wright, of Hollis, says he has a cow that makes 26 lbs. of butter per week, and I have no reason to suspect that Mr. *Wright* would tell a *wrong* story. Now I should like to know all about this cow, the age, weight, manner of keeping, &c., and whether the breed, (which is new to me,) is reliable. Will Mr. Wright gratify my curiosity through your paper? I have a small number of cows of my own raising which I had looked upon with some degree of satisfaction. I have an account of the expense of keeping for the last year, and the account of milk, &c., which I had thought of sending to you; but these statements put the damper on my ambition; I must keep still, sell my little runts, and buy some cows that are cows. Yours respectfully, E. B.

Westboro', July 22, 1857.

FATTENING PROPERTIES OF PEAS AND BEANS.—These articles have been found by chemical analyses rich in nitrogen. The inference has been that they would be specially useful in supporting the waste of the muscles of animals, and it has been suggested that they would be particularly useful in the production of wool. They are evidently valuable for these purposes, but not the less valuable for the production of fat. Those persons who have used peas for fattening hogs, consider them worth as much as Indian corn. In districts where that grain is not grown, very fine pork is produced from peas. Dickson, in his work "On the Breeding of Live Stock," states that a sweep-stakes was entered into between five East Lothian farmers, to be claimed by the one who should be pronounced the best feeder of cattle. Forty cattle of the same breed, and in equal condition, were divided between them, as fairly as possible. They were put up together the second week in September, and killed at Christmas following. The winner of the stakes fed his animals wholly on *boiled beans* with hay.—*Exchange.*

MECHANISM OF VITAL ACTIONS.

The following is from an article by O. W. Holmes, in the last number of the *North American Review*:

If the reader of this paper live another complete year, his self-conscience principle will have migrated from its present tenement to another, the raw materials, even, of which are not as yet put together. A portion of that body of his which is to be will ripen in the corn of the next harvest. Another portion of his future person he will purchase, or others will purchase for him, headed up in certain barrels of potatoes. A third fraction is yet to be gathered in a southern rice-field. The limbs with which he is then to walk will be clad with flesh borrowed from the tenants of many stalls and pastures, now unconscious of their doom. The very organs of speech with which he is to talk so wisely, or plead so eloquently, or preach so effectively, must first serve his humbler brethren to bleat, to bellow, and for all the varied utterances of bristled or feathered barnyard life. His bones themselves are, to a great extent, *in posse*, and not *in esse*. A bag of phosphate of lime which he has ordered from Prof. Mapes for his grounds, contains a large part of what is to be his next year's skeleton. And, more than all this, and by far the greater part of his body is nothing after all but water; the main substance of his scattered members is to be looked for in the reservoir, in the running streams, at the bottom of the well, in the clouds that float over his head, or diffused among them all.

We need not wonder, in view of this perpetual change of material, that the living body, as a whole, resists decomposition. The striking picture drawn by Cuvier, in his Introduction to the Comparative Anatomy, in which the living loveliness of youthful beauty is contrasted with the fearful changes which a few hours will make in the lifeless form, loses its apparent significance when we remember the necessary consequence of the arrest of its interior movements. The living body is like a city kept sweet by drains running underground to every house, into which the water that supplies the wants of each household is constantly sweeping its refuse matters. The dead body is the same city, with its drains choked and its aqueducts dry. The individual system, like the mass of collective life that constitutes a people, is continually undergoing interstitial decomposition. If we take in a ton every twelvemonth, in the shape of food, drink, and air, and get rid of only a quarter of it unchanged in our own substance, we die ten times a year; not all of us at any one time, but a portion of us at every moment. It is a curious consequence of this, we may remark, by the way, that if the refuse of any of our great cities were properly economized, its population would eat itself over and over again in the course of every generation. We consume nothing. Our food is like those everlasting pills that old pharmacopœias tell of, heir-looms for the *dura ilia* of successive generations. But we change what we receive, first into our substance, then into waste matter, and we have no evidence that any single portion of the body resists decomposition longer during life than after death. Only, as that decays it is at once removed, while the living state continues.

AGRICULTURE THE MOST HONORABLE PURSUIT. —It is too generally the case that agriculture is looked upon as a low pursuit. It is the highest, the most honorable pursuit which the first man followed when he was placed in the garden of Eden, and commanded to "dress it and to keep it." It is the pursuit which the best men of all ages have followed; which has numbered Socrates and Cincinnatus, and Burns and Lafayette, and Jefferson and Washington.

What pursuit can be more honorable than that of cultivating the soil, and drawing from nature's vast resources those productions which support and sustain life? What vocation in life can compare with it? Who need be ashamed or disgraced in pursuing agriculture, unless he does it so improperly as to bring it upon himself, not upon his pursuit?

One cause, undoubtedly, which has a tendency to place a low estimate upon the profession of agriculture, is the low standard of intelligence which too frequently is the case, is considered competent to pursue it successfully. But every year this standard is being elevated, and it will not be long before a thorough education will be considered as indispensable to the farmer as it is to any of the learned professions. When this is the case, when the pursuit of agriculture is properly appreciated, when intelligence is considered an indispensable requisite to the pursuit, we shall not have that vast train of young men annually leaving farm life and embarking in the learned professions, or in commercial pursuits, there to lead lives harassed by the most perplexing cares, where failure is too often the result.

NATURAL ENEMIES OF INSECTS.

One of the most useful is the *toad*. He feeds wholly on insects. Perhaps some reader may demur to this, and cite the authority of a so-called "Professor" and some of his "Institute" associates, that "toads eat strawberries," and that, not satisfied with a fair average of the crop, "they always pick out the best." But our strawberry cultivators need not feel any special alarm at the presence of the toad in their grounds, as it was only the superior berries that were produced by the application of "tannic acid," that this animal has ever been accused of eating.

The toad feeds mostly at evening twilight, at which time he hunts for his prey. He is not dainty, but swallows bugs, grubs, and flies as they come in his way, or as he chances to find them. There are many insects which seldom go abroad by daylight—such as various moths, the May-bug (*Melolontha*,) and other beetles, and several species of insects, the larvæ of which are called "cut-worms," &c. All these are devoured by the toad. Later in the season he feeds on crickets and grasshoppers. As before remarked, he is entirely harmless in reference to vegetation, and on the whole, is the most useful of all animals, as an insect-destroyer. His manner of catching insects is such that even the most delicate plant is not injured by the act. His long tongue is thrust with unerring aim on the victim, who vanishes so suddenly that unless the observer pays close attention, he can hardly describe the operation.

The toad is particularly useful in gardens, where poultry cannot be introduced on account of the injury they would in various ways produce, although they might destroy many insects. The toad neither scratches the ground nor feeds on the crops, and his small size and trifling weight permit him to go

everywhere in search of his food. We are aware that many people have an antipathy to this innocent little animal. To "conquer" *such* "prejudices" would not only be a virtue on the score of humanity, but would be found to *pay* in a pecuniary sense, which relieves the case of those conflicting points so embarrassing to some minds.

The *frog* is an eater of insects to a considerable extent, but as most of the species stay near water, they take comparatively few of the insects most prejudicial to agriculture. But some kinds of frogs by no means confine their carniverous propensities to insects; they swallow young ducks which go on the water, or chickens which happen to come near it. Probably they would not eat insects enough to make it an object to harbor them; and to feed them with ducks and chickens would be altogether too expensive, even if we should adopt the custom of the Gallic epicures and turn the carcass of the frog to the best account.

That repulsive animal, the *skunk* (*Mephitis americana,*) destroys many insects. He appears to be particularly fond of beetles and crickets, but eats the larvæ of various insects. The May-bug, or June-bug (*Melolontha vulgaris,*) both in the larvæ (in which it is called the "white grub") and perfect state, is much sought after. The skunk digs out the insect, and the slight excavations it makes in doing this are frequently seen. It is doubtful whether this animal would ever commit depredations on the poultry-yard, if he could obtain insects enough. At any rate, in situations remote from the farm-buildings, he is very useful in his ordinary mode of life.

Bats live on insects, taking them, like the swallow, on the wing. So far as we have observed, they feed chiefly on small flies and moths which are in the air "between sunset and dark."—*Boston Cultivator.*

For the New England Farmer.

NOTES OF THE WEATHER.

Mr. Editor:—A stormy day is a good time to write about storms, and every farmer knows the value of a rain storm in haying. The electric disturbances of the atmosphere have been sudden, and almost constant, for about a week, producing peals of thunder every day, and vivid flashes of lightning by night. Steam power has been employed as it is in all storms; for Prof. Espy says, "All storms are produced by steam power." Heavy cumuli in dense masses have been forming in all quarters above the horizon, while the cirrus at the zenith thickened with a threatening aspect. The electric disturbance has induced small columns of heated air to ascend, until the vapor condensed by the cold and spread in the upper regions of the atmosphere, producing a local storm, while charges of electricity were drawn from one cloud to another differently electrified, or from the clouds to the earth, shivering in their mighty course whatever might chance to attract them; while vegetation has made rapid progress toward the perfection of the crops.

To-day the heavens wear a different aspect. The morning was ushered in with the whole firmament covered with heavy cumuli approaching nimbus, the threatening forerunner of extensive rain, while the thunder has ceased, and the air is cooled down to sixty-two degrees under the storm cloud; all atmospheric disturbance is at an end, or has combined with the great storm cloud to equalize the temperature of the air over a vast extent of country, while the watery accumulations stored up for days past in the portals of the sky, fall by the force of gravity upon the earth. The rain commenced at nine, A. M., and continued through the day without intermission until four P. M.

The direction of the upper strata of clouds has been somewhat peculiar; all the clouds for several days have had a direction from South-west to North-east, which is quite different from the ordinary course of clouds, which is from West and North-west. To-day the clouds are rolling up from South-east in a manner that betokens a heavy storm. A South-west or South-east wind brings rain in large quantities oftener than winds from North or West. The amount of rain was seven-tenths of an inch, a quantity of no great magnitude, only about half as much as fell last Sunday night between nine and eleven o'clock, during a thunder storm, but it was probably much more extensive.

D. Buckland.

Brandon, Vt., July 23.

HON. MARSHALL P. WILDER.

The New York *Tribune*, in speaking of the late national trial of agricultural implements at Syracuse, New York, mentions Col. Wilder in the following just and complimentary terms:

The president of the National Society, Col. M. P. Wilder, of Massachusetts, has deserved a still more emphatic acknowledgment. He is not in public life, and we believe does not aspire to be; he has by diligence in business acquired a competence, and has attained an age at which most men in comfortable circumstances are inclined to throw aside the cares and labors of active life, and enjoy that repose for which they have honorably struggled so long. Yet Col. Wilder continues to give his time, his means, and his best energies, to the cause of agricultural progress, with the enthusiasm of youth and a constancy befitting the prime of life. Long may he live to pursue his career of honorable usefulness, and at its close may a fit successor be found to follow in his footsteps.

Remarks.—We have known Col. Wilder long and well; long enough and well enough, we believe, to understand something of his inward life, something of those springs of action which keep him in the field, intelligent and buoyant, when most men have left the work which they did not feel obliged to accomplish. The great cause in which he labors so indefatigably, is not merely one of to-day, to benefit only those who co-operate with him, but one to bless millions, one that underlies and sustains all others, and that is the foundation of all national prosperity and wealth. He is energetic and prompt, lays his own plans with remarkable sagacity and foresight, or comprehends those of others at a glance, and when his conclusions are made, executes with a bold and master hand. His pecuniary means, as well as his personal efforts, are freely used to carry forward any enterprise in which he has engaged, sometimes to a very considerable amount, even where the object is a common one, and his personal

interests are no greater than those of any in the community.

His love for the cultivation of the earth, to make her prolific and generous to man, and more than repay him for his labors, amounts to a passion, so that his experiments, his practical teachings, and his writings, have already done much good, and will continue to, long after he is gathered into the great harvest. Few men have continued faithful and active so long in any cause, as Col. Wilder has in the one which has received so large a share of his personal attention; and fewer still have pursued a cause with such ardor, constancy and devotion. No discouragements—and they have sometimes been impending and gloomy—no personal inconvenience, faltering of others, or lack of means, has turned him from the course marked out, until effort has been crowned with success.

How strange it is, that so few persons make agriculture a study, and its labors the profession of life; that so few look into the physiology of animals and plants, the effect of the varied seasons on vegetation, aeration, or airing of the soil, the habits and noxious or beneficial influence of insects, the effect of manures, the comparative value of grasses and grains, and many other topics of the first importance to the world. There must be something radically wrong in the common modes of conducting agricultural business, when so many forsake it for new and untried schemes, and so few find those charms in it which Virgil and Homer and Tull and Loudon and Colman have set forth in attractive and sometimes glowing words. Col. W. has often spoken of this want of desire for rural life, and has steadily aimed to indoctrinate the young with a taste for the calm and steady employment of horticultural or agricultural art. His own success, and the instances which he is able to cite, afford ample evidence that such pursuits are more profitable than any other, if we take a large number of each into the account. Massachusetts has other worthy sons engaged in this productive art, whose names stand bright in her history, and whose character and effort would be an ornament and blessing to any age. May our young men imitate their examples, and qualify themselves to make good their places.

FLESH EATING AND VEGETABLE EATING.—To consider man anatomically, he is decidedly a vegetable eating animal. He is constructed like no flesh eating animal, but like all vegetable eating animals. He has not any claws like the lion, the tiger or the cat, but his teeth are short and smooth, like those of the horse, cow, and the fruit eating animals; and his hand is evidently intended to pluck the fruit, not to seize his fellow animals. What animal does man most resemble in every respect? The ape tribes, frugiverous animals. Doves and sheep by being fed on animal food, (and they may be, as he has fully proved,) will come to refuse their natural food; thus it has been with man. On the contrary, even cats may be brought up to live on vegetable food so that they will not touch any sort of flesh, and be quite vigorous and sleek. Such cats will kill their natural prey just as other cats, but will refuse them as food.

Man is naturally a vegetable eating animal; how then could he possibly be injured by abstinence from flesh? A man, by way of experiment, was made to live entirely on animal food; after having persevered ten days, symptoms of incipient putrefaction began to manifest themselves.

Dr. Lamb, of London, has lived for the last thirty years on a diet of vegetable food. He commenced when he was about fifty years of age, so he is now about eighty, rather more I believe, and is still healthy and vigorous. The writer of the Oriental Manual mentions that he has seen compound fracture of the skull among them, yet the patient to be at his work as if nothing had ailed him, at the end of three days. How different is it with our flesh eating, porter-swilling London brewers! a scratch is almost death to them.—*Flowers and Fruits, by J. E. Duncan.*

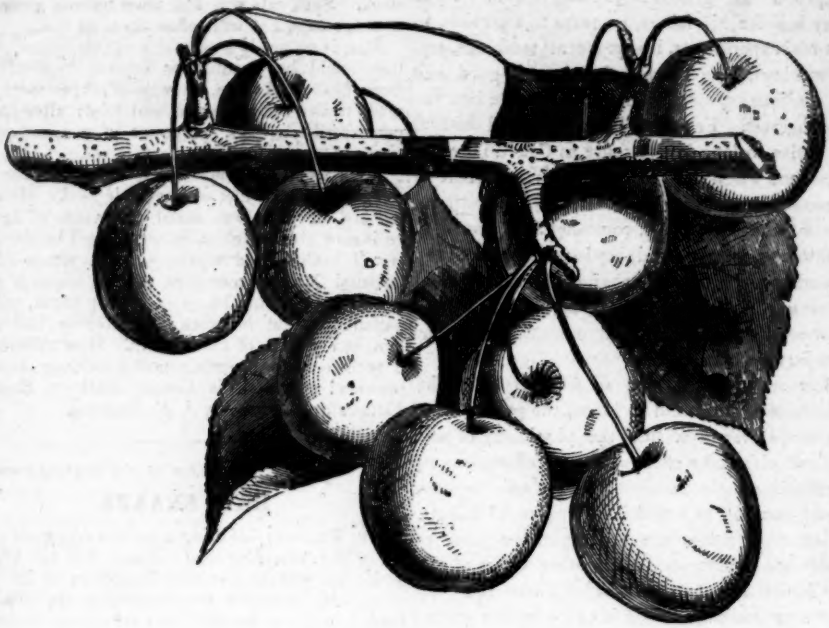
For the New England Farmer.

HAIR SNAKES.

MR. EDITOR:—Having a good, a *very good* opinion of the *New England Farmer*, it is not often I let it pass without a careful inspection of its contents. My attention was somewhat arrested, indeed I may say brought to a stand, on reading a passage found in an article on hair snakes, written by Mr. Wellington Rose, and published in the *Farmer*, in the issue of the 20th of last June. On the subject of the controversy, (if there be any,) of the origin of these little reptiles, I have nothing to say, but wish to call attention to the case of the man who is said to have pushed one from the urinary bladder, through the urethra. Nor shall I dispute the fact that he did so, for there are more things in heaven and on earth than our philosophy has dreamed of. But the way it got there. It seems the physicians, and I suppose Mr. Rose, were well convinced that the hair that became vivified, found its peculiar place of incubation by being swallowed, and whether it became animated while in the stomach, or during its journey to the bladder, or while in that receptacle, is not stated, nor is, perhaps, material. But I do wish that Mr. Rose, or yourself, or some of your correspondents, would tell us by what means, or by what vessel, or set of vessels, the thing made its way from the stomach to the bladder. It appears to me that if such are the facts, and no mistake, it presents new and unexplored fields in anatomy and physiology, that are certainly worthy of investigation. If a satisfactory explanation can be given, it will assuredly throw great light on some subjects, hitherto considered extremely dark. ALFRED PIXLEY.

Enosburgh Falls, 1857.

☞ A cow that runs almost entirely to milk, will grow poorer, rather than otherwise, in good pasture. She will require more water and grass.—Her rich food will be almost entirely absorbed in the production of milk. She will be likely, too, to be short lived.



SIBERIAN CRAB APPLE.

In a few remarks we made in a recent number of the *Farmer*, we recommended the cultivation of this beautiful little fruit, both for ornament and use. Our excellent correspondent, S. P. Fowler, of Danvers-port, brought us last fall a specimen of the yellow crab apple, which was so beautiful that we had a drawing made of a part of the branch, and present it above.

The tree is vigorous and strong, and of a rather small size, very ornamental when in blossom, from the profusion of its white flowers. The fruit grows in rich clusters, resembling, in the red variety, at a little distance, large and handsome cherries. The red crab apple is more common than the golden, but is not quite as large, and is not so highly esteemed for preserves. The size and appearance of the fruit are well represented in our engraving, and we will only repeat our advice, that, at the proper season, everybody who owns room enough for one to grow in, should set out a crab apple tree.

SHEEP POCKET PICKING.—The Urbana *Citizen* tells the following story, which we must believe, and yet it is very hard of deglutition:—"A man went into a field to work, and hung his coat on the fence. A pet sheep in his flock abstracted his wallet from his pocket, broke the leather string around it, and eat up fourteen dollars in bank notes, and a couple of promissory notes. On returning to his coat, and finding his wallet on the ground and its valuables gone, the squire immediately suspected the pet sheep, arrested and dispatched him, (though a great favorite in the family,) and in his paunch actually found the bank bills in a tolerable state of preservation. The bills were all of a small denomination, the largest being a three, and yet, strange to tell, but two of the ones were so badly injured as to be unfit for use. This, we believe, is the first instance we ever heard of a sheep stealing money, and it forfeited its life for its temerity."

DIFFERENCE BETWEEN A WATCH AND A CLOCK.—A watch differs from a clock in its having a vibrating wheel instead of a vibrating pendulum; and, as in a clock, gravity is always pulling the pendulum down to the bottom of its arc, which is its natural place of rest, but does not fix it there, because the momentum acquired during its fall from one side carries it up to an equal height on the other—so in a watch a spring, generally spiral, surrounding the axis of the balance-wheel, is always pulling this toward a middle position of rest, but does not fix it there, because the momentum acquired during its approach to the middle position from either side carries it just as far past on the other side, and the spring has to begin its work again. The balance-wheel at each vibration allows one tooth of the adjoining wheel to pass, as the pendulum does in a clock; and the record of the beats is preserved by the wheel which follows. A

main-spring is used to keep up the motion of the watch, instead of the weight used in a clock; and as the spring acts equally well whatever be its position, a watch keeps time although carried in the pocket, or in a moving ship. In winding up a watch, one turn of the axle on which the key is fixed is rendered equivalent, by the train of wheels, to about four hundred turns or beats of the balance-wheel; and thus the exertion, during a few seconds, of the hand which winds up, gives motion for twenty-four or thirty hours.—*Dr. Arnott.*

For the New England Farmer.

LETTER FROM MR. FRENCH.

EXHIBITION OF THE ROYAL AGRICULTURAL SOCIETY.

Salisbury, England, July 21, 1857.

MY DEAR BROWN:—Mindful of my promise in my last letter, that I would stick to my text, and give a straight-forward account of this great annual exhibition of the agricultural wealth of England, I proceed at once to a walk through the plowing-field and implement department, which are all that have yet been opened to the public; and first, let us glance at the

STEAM PLOWS.

There are but three in competition for the prize. One of these, known as Fowler's, I saw at work near Ipswich, and think I gave some description of it in a former letter, but am not certain. It is worked by a stationary engine, at the end of the land, and an anchor, as it is called, is at the opposite end, with a pulley through which runs a wire rope, by which the plows are drawn back and forth. Fowler's machine works perfectly well, and is only objectionable because it has a stationary engine, which involves the use of ropes, twice, at least, the length of the furrow. If you plow a furrow eighty rods, you are constantly using a half mile of rope. And again, the heavy engine is to be drawn about from field to field by horses, and tenders with coal and water, drawn by horses, must wait upon it. On the whole, though it is obvious that plowing may be done in this way, it hardly comes up to one's notions of steam plowing. It seems a primitive and awkward application of the power, and no genius or skill seems requisite to its success, except that a good plow-maker is essential to arrange the plows, which are worked in gangs of three or four, plowing at any reasonable depth and width, and at about the rate of an acre an hour.

Another machine, called Williams's Patent, was also at work. This is drawn by a stationary engine and ropes in the same way, and guided partly by a horse in a pair of shafts. This has to be turned at the end of each furrow, and makes awkward work in the operation, while Fowler's is arranged with two gangs of plows, and goes back and forth without turning; first one gang and then the other plowing three or four furrows.

The third is known as Boydell's Patent, and is distinguished from the others, by being worked by a locomotive engine, which walks over the earth like some huge animal, puffing and snorting, and taking along behind and by its sides six plows at once, which cut their six furrows as it goes. Attached to the wheels are large flat blocks, six to each wheel, like rackets on a horse, which are laid down in turn, by the wheel in its revolution, and on which the iron rim of the wheel runs, the wheel in effect laying down a railway in sections and taking it up again as it goes. This is to prevent the wheel from cutting into the soil as the huge machine moves over the soft ground. This machine was not doing to-day so good work as Fowler's, but the quality of the work is of no special importance, at present. The question is as to the best mode of applying the power, whether by a stationary or locomotive engine. This engine walks about in a very intelligent sort of way, turns readily at the end of the furrow, stalks off to its water-tank when it is thirsty, and helps itself to water, and when it is hungry goes for its own coal. It marches from field to field, drawing its tender, supplied with coal and water, along with it, and even carries the dinner and extra clothing of the men. It is claimed that the same engine can draw your timber to market or the mill, haul in your loads of hay and grain, and in short do the work of the farm, instead of horses. As I said before, it is not a question of mere plowing, it is a question of the application of steam power, for it is obvious enough, that where we have a convenient power, plows, harrows, digging machines, or anything else, may be worked by it.

In France, I saw a steam engine moving over the field, without any railway, but rolling its broad wheels on the ground, like a wagon, and digging or spading the soil as it passed along.

I confess my present impression is in favor of a locomotive engine, and of spading instead of plowing, as being a more perfect operation, but I have not yet seen anything that comes up to my ideas of what a steam plow should be. My impression is that neither of the machines on exhibition here will work so cheaply as horses for the same amount of labor, and until steam can underbid horse power in cost, the latter will be preferred as more convenient and simple.

FARM IMPLEMENTS.

Steam engines of various power, from two horse to ten, are shown in operation, carrying threshing machines, chaff-cutters, vegetable cutters, mills for grinding wheat, crushing rape and oil-cake, sawing, and various other useful works. On nearly every large estate, I observe a steam engine, and farmers say that they could not well dispense with their use. The day is not fa distant, when we shall see them on American farms, plowing, reaping, mowing, hauling timber and driving machinery; and one of the best fields open to Yankee ingenuity, is the

invention of the right engine for this work, a handy little locomotive, that can do everything but eat and get weary like a horse team. The "American Eagle" mowing machine bearing the name of Nourse, of Boston, I am gratified to learn has taken the highest prize at this exhibition. The trials were had last week, and the award was announced to-day, and gave me as much pleasure as if I had been myself the exhibitor. One's patriotism thrives wonderfully on a foreign soil, and one hardly appreciates the full beauty of the American Eagle, till he is seen soaring in the distance across the ocean.

A great variety of turnip and wheat hoes are exhibited, indicating the different mode of cultivating those crops here, and in America.

Various light, thin hoes of different width, fitted so as to be changed, one after another, upon the same handle, are used in hoeing turnips, a weight in the form of a ring being slipped down over the handle for giving a heavier stroke on land where the weeds are large and firmly rooted. All the wheat is sowed in drills, about seven inches apart, and various drills for sowing it, form a conspicuous feature in this show. Horse hoes, or cultivators, are also used to work between the rows both of turnips and wheat, and are made to match the drills, so that a horse hoe is worked at one operation in some fourteen rows of wheat, or in four rows of turnips, and small harrows, cleaning four rows at a time of turnips or mangolds, I have frequently seen in operation. All the wheat in Lincolnshire at least, I may add, is carefully hand weeded, till all weeds are exterminated. Some idea of the nicety of English farm operations may be gained from these facts. Liquid manure drills are also shown, and machines for broadcast sowing of pulverized manures, like guano and superphosphate, but I observe nothing that is worth carrying across the water, for that purpose.

TILE MACHINES,

of various pattern, to work by hand, by horse power, or by steam, call for a particular notice, because the time is not far distant, when tiles for draining will be made in New England as commonly as brick. Two inch tiles can be made at a less price than bricks, when the business is well understood; the cost of burning being much less, because the tiles are but about half an inch thick, while bricks are two inches. The estimate is that it takes but five-sevenths as much coal to burn 1000 2-inch tile, as to burn 1000 brick, though they are usually burnt together. I observed particularly the operations of the "Pipe and Tile Machine," exhibited by the manufacturer, W. Williams, of Bedford. I saw it worked easily by one man, who is a tile maker, and who said that he and one boy can make with it seven thousand two inch tiles per day, after the clay is prepared in the pug mill. Four are made at once, by being pressed through four dies, and the box holds enough to make thirty-two, so that thirty-two are turned out as quickly as they can be taken away, and as many more as soon as the box is refilled. The size, No. 3, which is suitable for our use, costs at Bedford $88,50, with one die, and the extra dies for making three, four and six inch pipes, and other forms if desired, with the horses, as they are called, for removing the tiles, cost about five dollars each. Tile machines are adapted to the making of tiles for roofs as well as for draining purposes.

I think there are more roofs in England covered with tiles, than with everything else. No shingles are used, and cheap buildings are usually thatched with straw or rushes, in the country, while in the cities, the roofs are tiles or slate. The tiles are made in the machines, of various forms, and some of them, with rounded or ornamental corners, produce a very handsome effect, on ornamental cottages and gate lodges. My opinion is that tiles for roofs might be made in all parts of New England, and might be found a good substitute for shingles, and far less expensive than slate.

A sheep dipping machine for washing sheep, and also for some preparation for increasing the growth of wool, seemed a novel idea. To prove how his medicine would make the wool grow, the exhibitor showed me a fleece about as large as a small buffalo robe, the wool of which I measured, and found it fifteen inches long! a Cotswold fleece, he said.

I thought his preparation must have affected the sheep as much as the wool, by the size of the skin.

I have glanced at but few of the thousands of implements that are shown, only such as I deemed of some peculiar interest at home. In conclusion, on this subject, I may say, that the larger implements, like steam engines, threshing machines, horse carts, wheat drills, are made more thoroughly and more expensively than in New England, but that in the manufacture of nearly all small, hand tools, such as hoes, forks, shovels, rakes and the like, we far excel them. The reason I apprehend, is that with us the farmer who buys the implement uses it with his own hand, while here he buys it for a laborer's hand, and cares more for strength than lightness, or beauty of finish.

As I shall be obliged to notice at considerable length other parts of the exhibition, I will close this letter here, and commence another to-morrow.

Yours truly, H. F. F.

THE LANGUAGE OF MOTHER EARTH.—Plants are, as it were, the most direct language of the earth. Every new leaf, every strange flower is some secret that is pressing forth, and which, be-

cause it cannot speak for joy and love, becomes a mute quiet plant. When we find such a flower in a solitary place, does it not seem as if everything around was transfigured, and as if the little feathered ones loved best to dwell in its vicinity? Over the whole dry world is flung this green mysterious carpet of love. With every spring it is made new, and its strange writing is only known to be beloved, like the posies of the Orient. Forever will he read and never read his fill; and daily becomes aware of new revelations of living nature.

THE VEGETABLE GIRL.

There is an affluence of puns about the following verses by Mat Taylor that reminds us of Hood:

Behind a market-stall, installed,
I mark it every day,
Stands at her stand, the fairest girl
I've met with at the bay;
Her two lips are of cherry red,
Her hands a pretty pair,
With such a pretty turn up nose,
And lovely reddish hair.

'Tis there she stands from morn till night,
Her customers to please,
And to appease their appetites
She sells them beans and peas.
Attracted by the glances from
The apple of her eye,
And by her Chili apples, too,
Each passer-by will buy.

She stands upon her little feet,
Throughout the livelong day,
And sells her celery and turnips
A big cent by the way.
She charges off her stock for cliange,
Attending to each call;
And when she has but one beet left,
She says—"Now that beet's all!"

UNITED STATES AGRICULTURAL SOCIETY.

The Fifth Annual Exhibition of the United States Agricultural Society will be held on the spacious grounds of the "South Western Agricultural and Mechanical Association," at Louisville, Kentucky, on Tuesday, Wednesday, Thursday, Friday, and Saturday, September 1st, 2d, 3d, 4th and 5th, 1857. ☞ Announcements, that the Exhibition will take place in *October*, are erroneous, and should be corrected.

Encouraged by the continued success of its former exhibitions, and by the approbation of the Agricultural community, the Society has offered a list of Premiums to be awarded at Louisville, amounting, in the aggregate, to Twelve Thousand Dollars, for the various classes of Domestic Animals, Farm Products, Fruits, Flowers, Native Wines, Agricultural Implements, and Machinery. The Society's National Trial of Implements will be continued at Louisville. The awards of the jury, on the Mowers and Reapers, tried at Syracuse, N. Y., will be announced, and the machines tested will be on exhibition.

Local committees of citizens of Louisville have been appointed to act with the officers of the Society in perfecting arrangements, and Thirty Thousand Dollars have been guaranteed to meet expenses. A magnificent Floral and Fruit Hall and a spacious Implement Hall have already been erected on the grounds. This valuable co-operation and material aid, coupled with the excellence of the selected location, and the large amount of premiums offered, induces the expectation, that the exhibition of 1857 will be superior to any of its predecessors.

Favorable arrangements for the transportation of Stock, and other articles, will be made with the various railroads.

The List of Entries, the awards of Premiums, and the Proceedings, will be published in the Journal of the Society for 1857.

The Premium List, with the names of the Judges, and the Regulations of the Exhibition, will be furnished on application to Col. L. A. Whitely, Assistant Secretary of the United States Agricultural Society, Louisville, Kentucky.

Exhibitors of Agricultural Implements and Machinery can obtain any desired information by addressing Joseph E. Holmes, Superintendent, Newark, Ohio, until the 15th of August; after that date, all communications must be addressed to Louisville, Kentucky. If exhibitors delay their applications, it may be a matter of impossibility to furnish steam-power, or to make arrangements to test, in a thorough and satisfactory manner, the tardy machines.

MARSHALL P. WILDER, *President.*
BENJ. PERLEY POORE, *Secretary.*

MEADOW MUCK.

The value of muck as a fertilizing agent, is always in the precise ratio of the vegetable matter it contains—all extraneous matters serving only to increase the bulk without adding any percentage to the fructifying energies of the mass, or increasing its value as a stimulant of vegetable life. When, however, it is added to tough, viscid and tenacious clays, the admixture of sand may not be considered injurious, as the mechanical action of this earth will tend to overcome the innate adhesiveness which characterizes such soils; but as an application for loamy lands, in which there is little aluminous matter, the muck will be valuable in proportion to the fibrous or decomposable vegetable matter it contains.

All muck, when taken from its bed, is possessed of a certain degree of acidity, which renders it necessary to mix it with lime or wood ashes to neutralize the acidity before applying it to the soil. This may also be effected by exposing it to the atmosphere, or to the action of frost, for a time; or it may be sweetened by mixing it with manure in the yards or compost heap.

Muck is a most valuable fertilizer, when properly managed, and the farmer who is so fortunate as to possess the means of obtaining it in sufficient quantity, may bring his lands to any degree of fertility he desires, and at comparatively small cost. For corn and potatoes, as well as for garden vegetables, muck is one of the most valuable stimulants known.

For the New England Farmer.

ON THE PLANTING OF TREES

BY THE ROADSIDE, AND IN THE ENCLOSURES OF OUR DWELLINGS.

BY WILSON FLAGG.

Many objections have been made to the planting of shade trees near our dwellings, and in some cases by the roadside, on account of the dampness generated by them when they occupy our enclosures, and on account of the injury they do by shading the fields, when planted by the roadside. Tree planting in these situations may undoubtedly be carried to excess, and it is well to consider a few of those rules by which we should be governed in this matter. The roadside, the enclosures of our dwelling-houses and public grounds are not the only places which ought to be planted with trees. I have seen men diligently employed in setting out trees on the highway, when I have thought they would be more wisely employed, if they neglected the highway, and used their influence to prevent the sacrifice of a beautiful knoll of trees and shrubbery, in close proximity to the road, which another party was felling for fuel. Our tree associations should avoid giving their exclusive attention to the planting of trees by the roadside, and look out for the saving of many picturesque groups of wood and shrubbery that already exist, or for securing a new growth in those elevated spots which are beautiful when covered with trees, and unsightly when they are without them, and which are unsuitable either for tillage or pasture.

With regard to roadside planting, I believe it has been usual to plant indiscriminately on both sides of the road, and in all situations, without considering that both sides of a road do not always equally require the protection of trees, and that certain kinds of soils and situations are not suitable for all trees. One of the objections to roadside trees is that they shade the land which is contiguous to them. But if the road runs east and west, the trees on the south side of it would not shade the fields, and those on the north side would not shade the road. In this case the trees should be confined to the south side of the road, since on this side only would they afford any advantage to travellers, and on the other side only would they occasion any injury to tillage by their shade.

If the road runs north and south, trees might be planted indifferently on either side; but as the majority of our roads are not straight, and are constantly changing their course, we might follow this rule of planting, and find in the end as many trees on our left as on our right hand, in a journey of a few miles. When the road runs north and south, plant trees on each side; when it runs east and west, plant them only on the south side. But these are not the only rules which should govern our planting. There are but few individuals who would refuse their consent to allow any part of their lands adjoining the street to be planted with trees at a society's expense, provided the spots selected for this purpose were not valuable for tillage or pasture. As we are journeying through the country, a regular and uniform row of trees by the roadsides would be exceedingly tiresome, not only on account of their uniformity but from cutting off the prospect. Our roadsides, however, are in no cases planted so extensively as to cause any such annoyance. We are not liable to go to an extreme in the general planting of trees; but we may go to an extreme in planting them in particular situations. It may be a question whether the public has a right to shade a man's grounds injuriously by roadside trees, and also whether a private individual has a right to destroy a noble tree on his own premises, which has for many years beautified the landscape and shaded the highway. These points are to be considered when we are employed either in planting or in cutting down trees near the public road.

There are situations where plantations of trees might be made near the road, which would be favorable to the beauty of the landscape and valuable for shade. Such are those points where the road takes a turn round a swell of land comprising perhaps half an acre, and rising several feet above the level of the road. This may be a rocky declivity, or a gravelly hill; but if it be destitute of trees, it is a spot that deserves planting, and it would be better to neglect the roadside than such places as this. There is no comparison between the beauty of one such spot which is well wooded and another that is destitute of trees. A traveller may be annoyed by trees on the highway, that conceal the prospect, and tire him by their uniformity; but whatever might be his taste, he would not fail to be delighted with a wood on one of these conspicuous elevations, and almost painfully affected by the want of it. All such places, if they are destitute of trees should be immediately planted, and if wooded, they should be protected. A hundred trees grouped on such a spot are more ornamental to the landscape than the same number of trees by the roadside; but each want should be properly and judiciously supplied.

There is still more to be said with regard to roadside planting. In some of our old roads, groups of trees have come up spontaneously, in many situations, along with their undergrowth. Sometimes for a mile along one of these roads—though there is no appearance of a single tree that was planted by human hands—birches, pines, maples, and several other trees, appear, sometimes singly, sometimes in groups, and sometimes in a sort of broken row. The appearance of these trees, thus irregularly grouped, and of the accompanying shrubbery that decorates and half conceals the old stone-walls, is exceedingly delightful to the traveller. Yet in some instances these picturesque groups of trees and shrubbery have been cut down by the very persons who should protect them, to make room for a finer row of maples or elms, at proper distances apart and at proper distances from the fence. This sort of work may be necessary to a certain extent when one of these old roads becomes a thickly settled street in a village. Until such a necessity arrives, I should like to see every tree blasted that is planted at the expense of these beautiful groups, which a true lover of nature would preserve with the greatest care, though he were preparing to build a palace almost under their shade; and if I were about to remove a stone wall to substitute some more desirable fence, it should be removed without injuring the trees and shrubbery, which had come up on each side of it. In many of the enterprises for rural improvement which have been made in the country, those very objects have been destroyed which it is most important to preserve.

When we are about to make one of these plan-

tations, every one is aware of the necessity of avoiding uniformity in their arrangement, and a great deal of skill is required to avoid it. But the error which is most apt to be committed, is that of blending the different species of trees too equally. If a hundred trees are to be set out on a knoll, with the intention of forming them into a picturesque group, the planter perhaps will select twenty trees of five different species, and mix them in such a manner as that there shall be in no part a predominance of one kind. A careful observer will find that nature never blends her trees, or any other plants, in this way. He will observe that in one wood the majority of the trees are pines, with an occasional oak, maple, lime, or some other species dotted in among them; in another wood the general growth consists of oaks, or of beeches, interspersed with occasional individuals of other species. We seldom find a native wood, in which there are several species of trees so equally blended, that we cannot perceive at once the predominance of one kind.

Hence, in making a plantation, if we would give it a natural appearance, we should be as careful to avoid a thorough intermixture of species as to avoid regular rows, or any other kind of uniformity in their arrangement. A good rule for our guidance would be to decide in the first place whether this or that species should predominate. Suppose the white pine be selected for this purpose, the whole tract should be planted with white pines the first season. On the next season fill all the vacancies, occasioned by those which are dead or injured, with trees of such other species as may be desired. When the plantation has grown to a good size, it will be a fine wood, with a very pleasing and apparently spontaneous intermixture of deciduous hard wood trees.

A few remarks may be added in relation to trees near our dwelling-houses. It is not true that we cannot have too many trees in these situations. Indeed it would be unquestionably better for the health, if there were not a tree within twenty rods of our habitations, than if they entirely surrounded and overshadowed it with a dense grove that shut out the sun, and preserved a constant dampness in and around the house. All shade trees should be planted at such a distance from the house, as to afford each tree room to expand to its fullest dimensions without overhanging or reaching any part of the house, leaving ample space for the sun to shine upon the roof and the walls, and to dry up all the dampness occasioned by dews or rain. A disagreeable coolness and chilliness of the atmosphere is always perceptible, as soon as the sun begins to decline, around a house, and at the open doors and windows of a house that is surrounded with a dense growth of trees, during all the season while they are in leaf.

In a somewhat crowded village, with narrow streets, we are obliged to plant trees very near our dwellings, or dispense with them altogether. For such situations those species should be selected that run up tall and slender, without much spread of their lateral branches. In this respect the Lombardy poplar surpasses all other trees in the known world, and is unquestionably the best tree to be planted in narrow enclosures. Trees of this species are sometimes partially winter-killed; but so vigorous in their growth, that if the decayed limbs be removed the gap will be immediately filled. They have a dense and beautiful foliage, unsurpassed in the liveliness of its verdure and in its balsamic and healthful odors, and charm the ear at all times by the musical fluttering of their leaves. The Lombardy poplar is likewise, beyond all other trees, a favorite resort for our familiar singing birds. The nests of the common robin, the vires, the summer yellow bird and the indigo bird are constantly found among their branches, which, on account of their dense and peculiar growth, afford them unusual facilities for building and concealing their nests. A great deal of senseless ridicule has been cast upon this tree; though it is indeed the only tree that ought to be planted in the narrow streets and enclosures of some of our villages.

At a sufficient distance from the house to allow the sun to shine freely upon every part of it during a portion of the day, too many trees are not likely to be planted. It is only in close proximity to the house that they are injurious. The sun's rays should never be obstructed from our windows by foliage. The house should be shaded by window blinds and not by trees, which should only be near enough to enable the inmates of the house, in the hot days of summer, to take shelter under them without inconvenience, and to afford them an opportunity, from their windows, to listen to the singing birds, whose melodies are one of the principal charms of the mornings and evenings, in spring and early summer.

DRENCHING HORSES.

Messrs. Editors:—A few days since, I had a very fine stable horse taken suddenly ill. Supposing him to have the colic, I gave him a dose of salts and had him freely exercised. I then left home, supposing he would soon find relief, but when I returned three days later, he was very sick, breathing with great difficulty, and running from the nose a bloody mucous. Being no jockey I did not understand the nature of his disease, and several medicines being recommended, I gave him about half a pint of watermelon seed tea. While drenching him, he became so sick that I thought he would fall. I let his head down, and almost, if not the entire dose came from his nose with a great quantity of the same bloody corruption. He remained very sick, and within half an hour was dead. I opened him, and found his lungs, with the exception of a portion, as hard as a piece of liver, with indications of the bloody matter, which I traced the entire length of his windpipe. It was, therefore, pronounced inflammation of the lungs. From his having been to all appearances in perfect health three days before his death, and the general prolongation of the disease, I have drawn the conclusion that a portion if not all of his first drench w taken into his lungs, causing instant inflammation and death.

If some of your readers, more experienced in such matters, would give their opinion through your valuable paper, I have no doubt but it would be both valuable and interesting to a great many, as I feel confident there are more horses killed than cured in drenching.—*N. Green, in the Valley Farmer.*

A Simple Cure for a Snake Bite.—Mr. Jno. Andrews, of this district, informs us that a few days since he was fishing; he had with him a

small negro boy, who mistaking a mocasin for a stick, picked it up and was bitten on the thumb. Mr. Al had frequently been informed that his grandfather, one of our oldest settlers, who was a great hunter, had never failed to prevent any evil consequences resulting from a snake bite by washing the wound in water, and at the same time squeezing out the poison. He, in this case, resorted to this cure. Holding the wounded member under water, he washed it for some time. The cure was complete; the thumb did not even swell. The bite of the mocasin is as much dreaded as that of the rattlesnake. This statement may be relied upon. Mr. Andrews is a man of character. —*Darlington Flag.*

For the New England Farmer.

NEVER WHITEWASH TREES.

The orchardist should set his face like a flint against all sorts of compositions that leave a coating upon the bark, no matter what they are, nor what is claimed for them by charlatans or empirics. The arboriculturist of Boston Common made a sad mistake in coating those trees with some sort of composition, of the consistency of paint. The objection to this treatment is, that it interferes with the functions of the epidermis. But, say the users of these compositions, they are necessary for the destruction of insects. As well might they advocate the whitewashing of men, women and children, when infested with insects of the genus *Pediculus*, in order to get rid of them, as that of painting or whitewashing fruit or ornamental trees to rid them of *aphides*, habitants of their bark or outer covering. That trees grow and seem to flourish, notwithstanding this mistaken treatment, not because of it, is no more evidence in favor of it, than the fact that some persons, who seldom or never bathe, yet enjoy good health, is against bathing and surface cleanliness in general. There is no danger of keeping fruit trees too clean, and this can be done with pure soft water, or if a little soap be mixed with it, it may cause no harm. A good and the safest wash for trees is pure water.

The tree or plant is enveloped with its epidermis like an animal; and for any one to say that this has no function to perform beyond that of covering the organism animated with life, as the envelope does the letter, is to publish his ignorance of vegetable physiology. The condition of the covering of the animal is deemed somewhat essential to the state or condition of the animal; so of the tree; its bark or covering is indicative of the healthful vigor of the tree, or of its opposite condition. Any one at all acquainted with fruit trees, whether from a knowledge of long cultivation or of observation, is prepared to judge of the condition of an orchard, or garden of fruit or other trees, by looking at the condition of the bark. Several marked illustrations of this remark occur to the writer, which, but for seeming invidious, might be named. Such illustrations will occur to the mind of the reader. Hence, it would seem that the bark might have some function, essential to the growth of the tree, and its condition otherwise. Now what are the facts —not what is somebody's opinion about this matter under consideration? Facts, not opinions, constitute the material of which all true science is constructed. If the bark have no office to perform but that of your house—to protect its inmates from the heat and cold and storm,—then, as with your house, it may be painted or whitewashed according to taste or economy, and it will perform its purpose of protection all the better. And moreover, it would seem according to such notions, that it would matter little how many *aphides* might accumulate on this "impenetrable" envelope, house, covering, bark or epidermis.

De Candolle and Hedwig, celebrated naturalists, demonstrated by microscopic examinations that the epidermis of plants and trees abounds in pores. "If a plant, dried, shrunk and shrivelled, be placed in water, it imbibes moisture at once, and speedily acquires its original plumpness and verdure, obviously receiving aliment through the pores of its epidermis, which restore it." Hence, it is evident that "the moisture required by the plant for its nourishment is received through the pores of the bark, of the stem, the branches, the fruit, and the roots—no less than through the stomata of the leaves, and the open mouths of the spongioles."

Schleiden, a celebrated German botanist and professor, remarks that the epidermis has little orifices between the cells which compose it, leading to the interior of the plant, through which it communicates with the air, and expires gases, and inspires moisture, and peradventure, nutrition.—These are called stomatas.

Other celebrated botanists might be quoted further to demonstrate that the bark, like the skin, has other functions than that of protecting its inmate from the inclemencies of the weather; and further confirming the striking analogy between its functions and those of the skin. It is really astonishing that any person unless he has "an axe to grind," should assert "that the bark of trees has no vital or important function whatever to perform." After making such an absurd statement it is recommended "to whitewash as an important aid in the growth and nourishment of trees." One would about as soon think, in case the bark has no function, as asserted, of plastering the outside of his pig-sty, in order to make its inmates thrive and grow.

It is no uncommon thing for peach trees to look badly the first part of the season, especially if cold and wet, and, afterwards, when the weather becomes more genial, to change their aspect and grow and flourish finely, whether whitewashed or not. But this late growth is almost certain to winter-kill, because it has not had time to become ligneous. Dr. Harris and Mr. Buel may have, in former times, recommended whitewashing, but it was with reference to destroying insects without reflecting upon the evil done the tree, or perhaps, in view of the evils to choose the less. The writer joins with you, friend Brown, in proscribing all washes for trees that leave a coating on the surface, thus obstructing the essential functions of the epidermis. L. W.

THE CROPS SOUTH.—The St. Louis *Democrat* of the 8th inst. says of the crops South:

"We learn from our exchanges that the recent rains in north Mississippi, north Alabama, west Tennessee and Arkansas have proved of incalculable benefit to corn and cotton. The corn crop, it is stated, will beyond doubt prove immensely large. Cotton has also improved decidedly."

EXTRACTS AND REPLIES.

TO CURE WARTS ON COWS.

In a recent number of the *Farmer* a "Subscriber" wished to know what will cure warts on the teats of a cow. I would recommend a recipe you may find in vol. V. of the *Farmer*, p. 546.

"I tried walnut shells on the shoulder of a cow, where the warts covered a place six inches square. I took the walnuts, cut the shells off, and pounded them, (the shells) up so that I could press the juice out, and rubbed the warts with my hand and juice for about ten minutes every day for a week, when the warts began to be quite loose, so that you could pick them off easily. Before applying the juice, I rubbed the warts so as to take off all that I could; the last time I rubbed the warts till the blood came; now the warts are all gone, and the place looks as if none had ever been there."

July 27, 1857. WHITINSVILLE.

HOW TO STOP A JUMPING HORSE.

A gentleman from Goffstown, N. H., made the inquiry if you or any of your readers could inform him of the best method to prevent horses from jumping, when fettering would not stop them. I would inform him of a way which I have never known to fail. Put a strap round the neck, another round the girth, and then one from the neck to the girth, strapping his head down pretty low, then put a strap or rope from the neck-strap to the hind fetlock, between the fore legs; do not give it too much play. After he has tried it, I should be glad to have him reply through your paper how he succeeded. A SUBSCRIBER.

Brentwood, N. H.

TO KEEP ANTS FROM PLANTS.

I saw the question asked in the *Farmer*, if any one could tell how to keep ants from shrubs and plants without injury to them; I have tried tar on plants, by making a ring of it around the body of the plant about six inches from the ground, being careful to shake all the ants off first, and not leave a spot in the ring that is not covered with tar, and I have not seen one ant on any of the plants since.

Providence, 1857. C. A. S.

TO CURE SCRATCHES ON HORSES.

Take juniper bark and leaves, with a sufficient quantity of water to cover the same, and boil down strong; after it is cold, wash the part affected two or three times a day, till a cure is effected.

Brentwood, July 27. A SUBSCRIBER.

YOUNG FRUIT TREES—CARROTS.

MR. BROWN:—I am very much pleased with one feature of your valuable paper, namely, its "Extracts and Replies." Being somewhat interested in the cultivation of fruit, I want to know if you are practically acquainted with any of the dealers in fruit trees in Boston. Are there any who take up their trees carefully, and who will send what, and only what, their customers order? I purchased some trees at one time which were easy to set out, but they did not suit my fancy. The roots of them were so shaped, that I might have taken a crowbar and made holes for them; but what does one want of such trees? Now, if you could tell where I could get good, thrifty trees, with good roots on them, you would do me, and I doubt not, many of the readers of your paper, a great favor.

Can you tell me the weight of a bushel of carrots, and also beets? If you will please answer these inquiries, you will greatly oblige one of your constant READERS.

WHAT WILL KILL ANTS?

Cannot you suggest something in your paper for the effectual destruction of ants?

Springfield, July, 1857. C. L. COVELL.

WATER LIME PAINT.

I saw a recipe in the *Farmer* for making water lime paint. Will some one inform me where the paint can be found, or if it is known by any other name, as no one here knows anything about it?

Royalston, Mass. E. S.

A LITTLE TOO BAD.—A Schorahie paper mentions the novel fact that in consequence of the great want of help among the farmers of that county, able-bodied females are receiving a dollar a day for assisting in harvest. Yet big loafers in this section are complaining that they can find nothing to do.—*Albany Transcript.*

BOYS' DEPARTMENT.

AN EAST INDIAN SCHOOL.

The inspector enters; all the boys rise, put their right hand to their forehead, and shout, "Salaam, sahib!" The teacher, an olive complexioned man, with smooth, shining black hair, with a curling moustache, with a bristling beard, with a white robe, buttoned on the left hand side, comes forward, and makes the nearest approach to Eastern prostration which his Western superior will allow. The English inspector returns the salute of the boys, and disposes of that of the teacher with an action rather than a word, the action implying partly, "I am much obliged to you for your civility," partly, "Stand up; I also am a man." The salutations are over; business commences. Let us adopt the dramatic rotation, and endeavor thus to exhibit what follows:—

Inspector—Mulvjii, let me see the register of attendance.

Karim Cakah, teacher of the school—Sahib, it is here.

Inspector—I see you have 100 boys in daily attendance; that is very good.

Teacher—This number is entirely to be attributed to your good fortune and your personal excellence.

Inspector—I shall now call over the names. No boy is to speak whose name is not called. Let each boy as he is called answer, "Here."

Omnes—Yes, sir—"Here."

Inspector—Silence! no boy to speak whose name is not called.

Omnes—(each to his neighbor)—You are not to speak till your name is called.

Inspector—Silence!

The first five boys answer to their names; the sixth is absent.

Inspector calls his name.

Several voices—Shir Singh is ill.

Inspector—Silence! Did I not tell you that only the boy whose name is called is to speak? If a boy is absent, let me know it by his silence. Nobody is to answer for him. I shall begin again.

Inspector calls over the first five names with the same success as formerly. He approaches that Rubicon, Shir Singh.

"Now, take care, no one is to answer. Shir Singh!"

Small Boy—Shir Singh is ill.

Inspector—Who said that?

Omnes—Please, sir, Randall.

Inspector reads Randall a serious lecture. He impresses the duty of silence, and emphatically demands that no boy shall speak till he is spoken to. Before he has finished, the two neighbors of the culprit turn round and enforce the inspector's remarks by desiring Randall to hold his tongue.

"Why does he interrupt when the sahib is speaking?"

Inspector turns round to the fresh interrupters, and upbraids them.

"Yes, but you are committing the same fault; why do you talk without orders? All are to be quiet till they are told to speak."

Chorus of many voices, each boy addressing his neighbor—

"Be quiet; why do you speak without orders?"

Inspector despairs. He struggles through the roll-call as he may, and feels that he is met at the outset by the first great Asiatic difficulty—incontinence of speech.

EXAMPLES FOR POOR BOYS.

George Peabody, the London banker, was recently at Concord, N. H., and at a reception at the residence of N. G. Upham, related an incident which shows one of the traits of character to which he is indebted for success. Fifty years ago, at the age of twelve, he had occasion to pass through Concord on his way to Vermont. He stopped all night at the old Stickney Hotel, where he paid for his lodging and breakfast by sawing wood!

A St. Louis paper tells the following story of the senior partner of the firm of Gaty, McCane & Co., who carry on an immense iron foundry in that city:

"A poor boy, but possessed of that indomitable energy and resolution which are of more value than the coffers of an Astor, he was early an apprentice in the foundry of a Mr. Morton of Louisville, and soon became a proficient in the avocation which he had chosen. He was then but eleven years old, had never possessed the advantage of one day's schooling, and made his first appearance at Mr. Morton's foundry with little outward indication that he would in a few years be the owner of property to the amount of nearly a million of dollars. The secret of all this, however, is easily told.—Though uneducated, he was talented; he contracted habits of such punctuality and close attention to business, that from that day to this, he has never, during one working-day, absented himself from the workshop; he applied himself to mathematics during his leisure hours, and is now one of the best mathematicians in St. Louis; and he left the employment of Mr. Morton with the reputation of being one of the most competent and admirable workmen in the country. Here is a lesson and an example to the youth of our city, worth more than a hundred homilies on the rewards of industry, integrity, and perseverance."

LADIES' DEPARTMENT.

DOMESTIC RECEIPTS.

[SELECTED FROM GODEY'S LADY'S BOOK.]

RED OR WHITE CURRANT JAM.—Let the fruit be very ripe; pick it clean from the stalks; bruise it, and to every pound put three-quarters of a pound of loaf-sugar; stir it well, and boil half an hour, then add the sugar, boil and skim.

BLACK CURRANT JAM.—To every pound of black currants add the proportion of a pound and a quarter of sugar, made into a syrup with half a pint of water; boil the fruit half an hour before adding the syrup; and a quarter of an hour after. This is one of the most useful, wholesome and delicious jams that can be made.—*Or*, this preserve may be improved by adding to four pounds of black currants one pound of white and one pound of red currants, and then proceeding to boil, *without water*, and adding the sugar in the proportion fixed above.

BLACKBERRY JAM.—The common blackberry requires to be gathered ripe and dry, to be carefully picked, boiled for half an hour, and then half the weight of moist sugar added and boiled up again for ten minutes. It is a most wholesome preserve for children.

TO PRESERVE SIBERIAN OR AMERICAN CRABS.—To one pound of crabs, take a pound of fine sugar, the juice of a lemon, and a little syrup from common apples. Dissolve the sugar in it; let it boil, and skim clear; then prick the crabs, and put them into the syrup; let them boil gently till a straw will run through them; put them into pots and cover well with syrup.

TO PRESERVE MELON LIKE GINGER.—When the melon is nearly ripe, pare it thin, and cut it into pieces about the size of ginger; cover it with salt-water, changing it every day for three days; then put it in clear spring water, changing it twice a day for three days. Then make a thin syrup and boil it together with the melon once every day for three days; next make a thick syrup, adding the rind of one or more lemons, according to the quantity of melon, cut into narrow strips, and the juice squeezed in; then add some best white ginger, with the outside cut off, so as to make the syrup strong of the ginger. This should be boiled, and when cold put to the melon.

SWEDISH COOKERY.—Some of the purely national dishes, as lutfish on Christmas Eve, are most extraordinary things, lutfish being the stockfish steeped in a solution of potash, until, in fact, decomposition takes place. On Christmas Eve, the great evening of Sweden, this thing is boiled and eaten with oil sauce; and this, together with grot, which is simply boiled rice, form the Christmas dishes of Sweden, just as roast beef and plum pudding do in England. The smell of the lutfish is terrific; but a true Swede clings to his national dish on Jul-aften as any beef eating Englishman does to his.